

CHAPTER 12 TRANSPORTATION ELEMENT

INTRODUCTION

Purpose

The Transportation Element provides an inventory and assessment of existing conditions and trends covering several modes of transportation. In addition, it describes characteristics of the roadway, bicycle and sidewalk networks. This information will assist the City in determining transportation needs to support future population and employment growth.

An accessible, efficient and safe transportation network is a vital component of the City's general well being. The transportation network enables residents to travel to work, receive services, obtain goods, and interact with others. Transportation is especially crucial in the area of economic development where access to transportation facilities plays a major role in a prospective industry's decision to locate in a particular area. An assessment of the existing transportation network throughout Roswell is provided to help determine future transportation needs. The examination of travel characteristics, statistics, and trends undertaken in this chapter offers insight and solutions in terms of addressing Roswell's transportation issues and needs.

Overview of the Transportation System

Roswell's transportation system consists of state highways, arterial streets, collector streets, local streets, sidewalks, bicycle facilities, and multi-use trails. The City does not have air transportation, railroads or port facilities, so rail and water and air transportation planning do not apply in Roswell (although air transportation is addressed later in this chapter). Public transportation is currently limited to bus service along certain routes provided by the Metropolitan Atlanta Rapid Transit Authority (MARTA).

Prior Transportation Planning Efforts

The City of Roswell adopted a detailed transportation plan in 2000 as a part of its Comprehensive Plan 2020. At that time, a separate Transportation Element was not required. The Transportation Element included an inventory of existing conditions, a roads and highway plan, and a bicycle and pedestrian plan. Effective January 1, 2004, the Georgia Department of Community Affairs Revised Minimum Standards and Procedures for Local Comprehensive Planning went into effect, requiring a detailed Transportation Element for "advanced" planning jurisdictions. Per those requirements, there are tasks of data collection and assessment now required that were not fully addressed in the 2020 Comprehensive Plan.

This 2025 update to the Transportation Element consolidates the three chapters of the 2020 Transportation Plan into a single chapter and adds data and assessments as required by the state's administrative rules.

Roswell's Previous Transportation Plan

The City used a transportation model to develop the City's work program of transportation projects. The model revealed several transportation improvement projects designed to address

increasing congestion on the City's transportation network. Major improvement projects considered (and modeled) were, among others, the widening of Houze Road (SR 140), widening and extending Marietta Highway (SR 120) through the Historic District and Big Creek Unit of the National Recreation Area to connect with east Roswell, widening of Hardscrabble Road (to connect SR 92 and Old Milton Parkway with a multi-lane route), and parallel collector-distributor roads along Georgia 400. However, virtually every major road improvement project identified in the 2020 transportation planning process as helping to alleviate traffic congestion was found to have unacceptable impacts on businesses and neighborhoods. Major road improvements were rejected by Roswell's citizens and elected officials. There is still little if any support for widening existing roads or constructing new roads.

Objectives for the Transportation Plan Update

While traffic congestion has increased regionally and Roswell's tolerance for enduring extreme traffic congestion has weakened some since the 2020 Plan was adopted, the overall course of transportation planning in 2005 (for 2025) has not changed significantly since the 2020 Plan was adopted in 2000. In fact, Roswell's City Council is still reluctant to support major road widenings, because they are viewed as helping move regional (non-city) traffic through Roswell at the expense (impact wise) of its citizens. Roswell's leadership recognizes the City has a role to play in helping to address regional transportation issues. However, Roswell has also been disproportionately impacted by major regional east-west and north-south routes (e.g., SR 92, SR 140, and SR 9) and does not desire to increase adverse impacts in the City as a result of road widenings. Hence, the overall direction of Roswell's transportation is consistent with the planning process and plan produced in 2000 – *to focus attention on roadway improvements that improve operations and safety (and to some extent, intersection capacities) and work toward improving the pedestrian and bicycle systems and connections to major origins and destinations.*

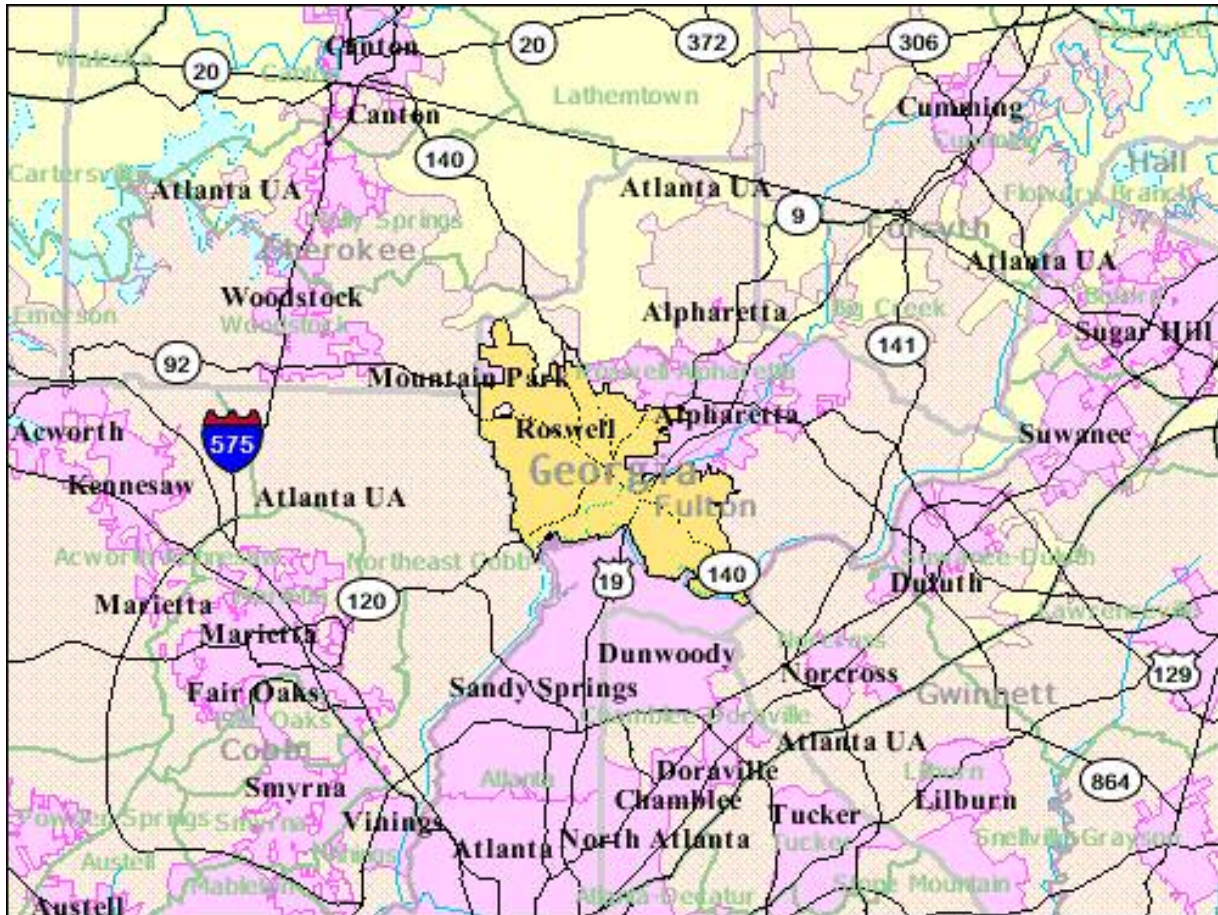
Transportation Planning is an Ongoing Process

It is important to note that, at the time this chapter was written (March 2005), Roswell had budgeted for and was poised to undertake more detailed transportation planning. Hence, this chapter was written with the understanding that its primary purpose is compliance with the state's new minimum standards for transportation plans, since more detailed planning is imminent.

The Transportation-Air Quality Connection

Roswell is in the metropolitan Atlanta non-attainment area with regard to nationally designated ambient air quality standards (Federal Clean Air Act). See Map 12.1 for Roswell's location with regard to the north part of the metro Atlanta region. In metro Atlanta, 52 percent of nitrogen oxides (NOx) emissions (one of the pollutants that, with sunlight and heat, create ozone, a primary component of smog) come from on-road mobile sources: cars and trucks. As such, local land use and transportation policies of the City are expected to comply with regional transportation plans and work toward implementation of the State Implementation Plan. Violations of air quality standards are regional, but all local governments need to investigate transportation-related sources that contribute to air quality non-attainment and propose and implement plans, programs, and regulations that will help implement regional and state plans for removing non-attainment status. Roswell's transportation plan, which emphasizes multi-modal transportation access over widening major thoroughfares, is consistent with the need to improve air quality in the region.

Metropolitan Atlanta is a service-oriented region. In the 13-county non-attainment area, 35 percent of the employee population is devoted to the service industry. This figure is above both the state and national levels. Travel and the subsequent NOx emissions precipitate from a need to deliver those services. Only 12 percent of the employee population is devoted to manufacturing, which is below both the state and national levels. A substantial percentage of Atlanta's employment base (wholesale/retail trade, transportation, etc.) obviously results in mobile emissions and reliance on the automobile.



Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrix P1; (40 miles across)

Map 12.1
Roswell, Georgia, Area in Regional Context

Atlantans now travel more miles per day per capita than their counterparts in any other major metropolitan area in the U.S.: 33.96 miles per person per day (1997 data). In the 13-county Atlanta nonattainment area, residents drive an estimated 110.4 million miles per day. This is an increase of 35.5 percent over 1990 total vehicle miles traveled (VMT). It is estimated that metro-Atlantans will be driving 171 million miles a day by 2020. The average commute time is 50.8 minutes (round-trip) and that has grown by six minutes over the last 14 years. VMT increased 28 percent in the 1990s in Fulton County. In Roswell, 23 percent of the working population drove more than 45 minutes to work.

The Clean Air Campaign (CAC) was formed in 1996 by government, business, civic, health, environmental and educational organizations as a way to mitigate mobile source pollution. CAC is a not-for-profit organization that serves as a clearinghouse for a multitude of organizations that have programs in place to address traffic congestion and air pollution. CAC works with more than 900 employers in the region to mitigate traffic congestion and improve air quality. CAC offers a variety of voluntary programs and services, including free employer assistance, public information, and children's education. Currently CAC is working with nine partner employers in Roswell.

Fulton County has one Transportation Management Association (TMA), the Perimeter Transportation Coalition (PTC), which is a business-sponsored nonprofit organization dedicated to helping businesses work together to improve mobility and access throughout the Central Perimeter area of Fulton County. The City of Alpharetta once considered starting a TMA; the Greater North Fulton Chamber of Commerce may now take up this cause.

Transportation Modeling

In 1999 and 2000, as a part of its 2020 Comprehensive Plan, the City of Roswell derived its own transportation model using Traffic Analysis Zones (TAZs) from the 1990 Census.¹ TAZs are small areas used in transportation planning to summarize demographic characteristics and travel data. Based on model data for Fulton County, the City hired a consultant who split the existing TAZs to better reflect transportation patterns. The consultant projected conditions until the year 2020. The City did not seek an update of its transportation model in conjunction with the 2025 Comprehensive Plan Update. Roswell's Transportation Element for the year 2025 thus does not include additional transportation modeling.

The City's reasons for not engaging in further model refinement as part of this 2025 Comprehensive Plan Update deserve further explanation. First, as already noted, Roswell's transportation process is ongoing, with detailed transportation planning programmed during 2005 while the Comprehensive Plan is required to be submitted for state and regional review in order to meet the City's recertification date for maintaining its qualified local government status.

Second, more recent data are available from the Atlanta Regional Commission's model forecasts (i.e., regional mobility for the year 2030), but Roswell believes that the data on which its own transportation model was built are more accurate. As a part of the 2025 comprehensive planning effort, Roswell's planning consultants examined ARC's projections by census tract and found that the population projections were too low and the employment projections were generally too high.² This finding, coupled with its prior finding that regional TAZ household and employment data were evenly spread (inappropriately) among TAZs, led Roswell's comprehensive planning consultants to conclude it was more accurate to rely on the prior City-sponsored projections used in the City's 2000 transportation model.³

¹ Roswell's planning staff provided revisions to regional TAZ data on population, housing and employment, since it was found that the regional data available at that time had not been calibrated well to Roswell's specific conditions. For instance, regional TAZ data often allocate population, households, and jobs evenly among TAZs in a given census tract. Such practice was found to show employment in parts of the City were exclusively residential.

² See Chapter 1, Population Element, and Chapter 3, Economic Development Element, for projections of population, households and employment.

³ One significant drawback to this decision is an inability to extend transportation network conditions to the horizon year of 2025. The City's comprehensive planning consultants considered this point and discussed the tradeoffs with

Third, an update to the citywide transportation model would not be expected to reveal additional information that would influence the overall direction or specific projects of Roswell's adopted transportation plan. For instance, Roswell's transportation plan adopted in 2000 projected that levels of service projections in the year 2020 on most arterial roadways and collectors will be at a level of service "F" (see Table 12.8 in this Chapter).

Finally, the transportation plan presented in this chapter needs to maintain consistency in its analysis. Selective use of Regional Transportation Plan (Mobility 2030) data might impair the methodological consistency of the 2020 transportation planning approach. The reliability of this chapter's findings might be undermined with selected (rather than full) use of regional data. In short, use of ARC's 2030 data was mostly an "all or nothing" proposition: either it needed to be used in total (with or without a local model refinement) or the City was better off using its own data (which were based on ARC's previous Regional Transportation Plan and model).

TRANSPORTATION CHARACTERISTICS OF ROSWELL'S CITIZENRY

Vehicles Per Household

The 2000 Decennial Census provides data that help understand the transportation behavior of Roswell's citizenry. Though already five years old, the data in this section are considered a reasonable depiction of current conditions.

Table 12.1
Vehicles Per Household By Type of Housing Occupancy, 2000
City of Roswell

Vehicle Availability	Owner-Occupied Housing Units	%	Renter-Occupied Housing Units	%	All Housing Units	%
No vehicle available	226	1.1	705	7.1	931	3.0
1 vehicle available	4,212	20.7	4,697	47.2	8,909	29.4
2 vehicles available	11,168	54.9	3,866	38.8	15,034	49.6
3 vehicles available	3,817	18.8	536	5.4	4,353	14.4
4 vehicles available	763	3.7	86	0.9	849	2.8
5+ vehicles available	163	0.8	65	0.7	228	0.8
Total	20,349	100%	9,955	100%	30,304	100%

Source: U.S. Census Bureau, Census 2000 Summary File 3, Tables H7, H44, H46, HCT11, and HCT12.

First, as indicated in Table 12.1, there was a small percentage (3%) of households in 2000, mostly renters, that did not have a vehicle available. The vast majority of households in Roswell in 2000 had at least two vehicles available. While the small number of households without a vehicle available is not an excuse to ignore the needs of the transportation disadvantaged, it underscores the fact that mobility in Roswell in 2000 was almost exclusively by vehicle.

plan review staff of the Georgia Department of Community Affairs. Considering that the future forecasted levels of congestion in the 2020 Plan would not be materially different from any updated forecasts for the year 2025, it was suggested to DCA staff that the 2020 data would be more reliable.

Means of Transportation to Work

Table 12.2 depicts work commute travel modes for the year 2000. When compared to the surrounding counties in the Atlanta metropolitan area, Roswell is at the high end median for workers traveling alone by autos, trucks and vans. Approximately nine out of ten (90 percent) of all workers age 16 and over drive to work alone compared to over eighty percent (80%) in Fayette and Henry counties and just over seventy percent (70%) in Fulton and DeKalb counties. This reflects the more suburban nature of North Fulton County as compared to other counties.

Almost ninety-five percent (95%) of workers age 16 and over in Roswell traveled by car, truck, or van in the year 2000. Only one percent (1%) of Roswell workers used public transportation, including MARTA bus and heavy rail to travel to work, whereas one percent (1%) walked to work and more than five percent (5%) worked from home. While these percentages illustrate the dependence on private automobile for home-based work trips, the percentages also illustrate the potential opportunities to reduce travel demand through mixed-use developments where employees can walk to work and recreation and through telecommuting where employees could work from home in Roswell.

Table 12.2
Means of Transportation to Work, 2000
Workers 16 Years and Over
City of Roswell

Means of Transportation to Work	Number of Persons	Percent of Total
Car, truck, or van:	39,534	89.8%
-----Drove alone	34,940	79.4%
-----Carpooled	4,594	10.4%
Public transportation	842	1.9%
Motorcycle	24	0.1%
Bicycle	50	0.1%
Walked	475	1.1%
Other means	585	1.3%
Worked at home	2,514	5.7%
Total	44,024	100%

Source: U.S. Census Bureau, Census 2000.

Travel Time to Work

Travel time to work is a function of distance traveled and levels of congestion. A worker may have to travel only a short distance, but if in congested conditions, travel time can still be higher than average. The average commute time was generally about thirty (30) minutes in the year 2000 in metropolitan Atlanta. Table 12.3 illustrates three distinct groups regarding travel time to work within Roswell.

Table 12.3
Travel Time to Work, 2000 for Workers 16 Years and Older
City of Roswell

Travel Time to Work	Number of Workers	Percent of All Workers
Less than 5 minutes	449	1.0%
5 to 9 minutes	2,433	5.5%
10 to 14 minutes	4,108	9.4%
15 to 19 minutes	5,259	11.9%
20 to 24 minutes	5,519	12.5%
25 to 29 minutes	2,513	5.7%
30 to 34 minutes	7,136	16.2%
35 to 39 minutes	1,765	4.0%
40 to 44 minutes	2,819	6.4%
45 to 59 minutes	5,497	12.5%
60 to 89 minutes	2,951	6.7%
90 or more minutes	1,061	2.4%
Worked at home	2,514	5.8%
Total	44,024	100%

Source: U.S. Census Bureau Census 2000, SF 3.

Those Roswell workers whose travel times were less than 30 minutes in 2000 constituted 46 percent of all workers 16 years of age or more residing in the City. About the same percentage had commute times between 30 and 60 minutes in 2000. Roswell's close proximity to Alpharetta is consistent with the significant percentage of travel times that are less than ½ hour, while the same percentage for higher travel times is most likely associated with workers accessing more remote employment centers such as Midtown Atlanta, where most routes, such as I-285 and the I-75/85 connector, are heavily congested during large portions of the day.

Time Leaving for Work

Table 12.4 illustrates the times that Roswell workers were leaving home for work in the year 2000. The relatively high numbers of commuters leaving after 6:30 a.m. reflect the travel times above and mimic the phenomena of "peak spreading," where the traditional peak hour has extended to multiple hours due to traffic congestion. The data in Table 12.4 also reflect the associated travel demand reduction strategies, such as flexible work shifts, which allow workers to miss the heaviest congestion during the peak period.

Table 12.4
Time Leaving Home to Work, 2000
Employed Workers 16 Years and Over
City of Roswell

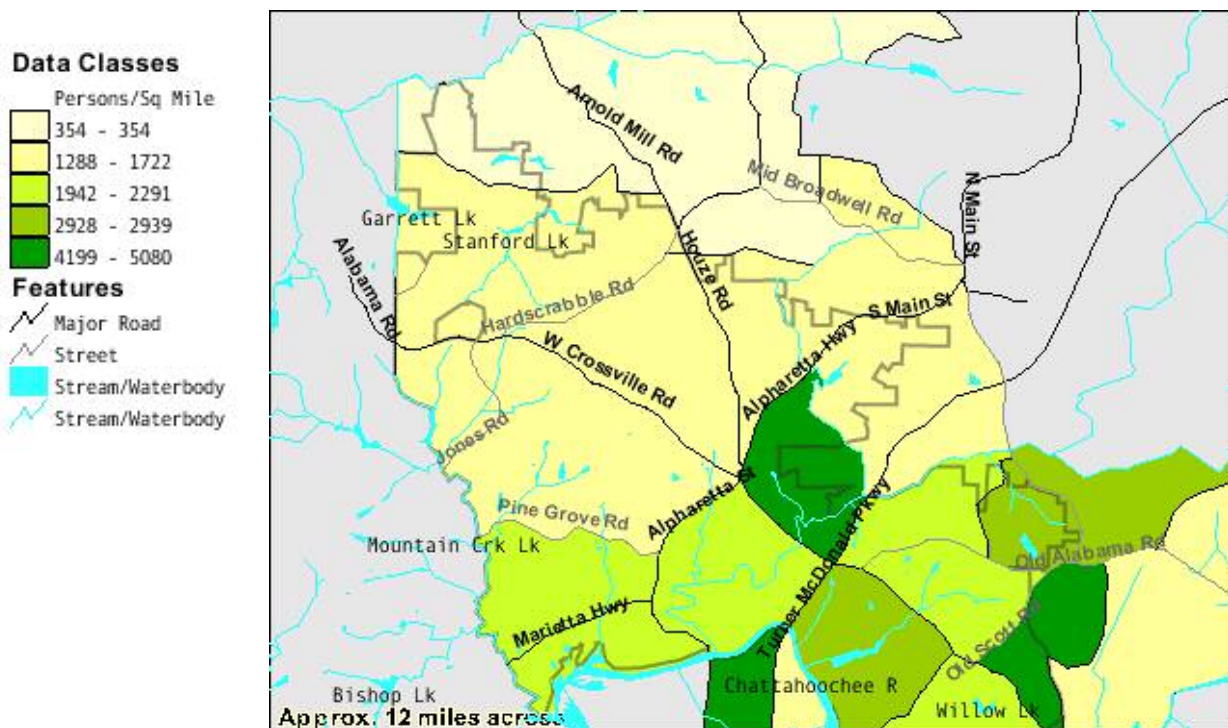
Time of Day Leaving for Work	Number of Workers	Percentage of Total Workers
12:00 a.m. to 4:59 a.m.	541	1.2%
5:00 a.m. to 5:29 a.m.	478	1.1%
5:30 a.m. to 5:59 a.m.	946	2.1%
6:00 a.m. to 6:29 a.m.	2,959	6.7%
6:30 a.m. to 6:59 a.m.	4,920	11.2%
7:00 a.m. to 7:29 a.m.	8,243	18.7%
7:30 a.m. to 7:59 a.m.	6,225	14.1%
8:00 a.m. to 8:29 a.m.	5,023	11.4%
8:30 a.m. to 8:59 a.m.	3,061	7.0%
9:00 a.m. to 9:59 a.m.	3,711	8.4%
10:00 a.m. to 10:59 a.m.	1,300	3.0%
11:00 a.m. to 11:59 a.m.	555	1.3%
12:00 p.m. to 3:59 p.m.	1,482	3.4%
4:00 p.m. to 11:59 p.m.	2,066	4.7%
Worked at home	2,514	5.7%
Total	44,024	100%

Source: U.S. Census Bureau Census 2000, SF 3.

Other Findings and Trends

From the Population and Economic Development Elements, other trends that have transportation implications are observed. The population of Roswell increased substantially during the last three decades, but the population increase was also largely due to annexations. The labor force increased by 20 percent from 1990-2000. This means that more people are commuting daily to work and the vast majority of those, some 90 percent, travel alone in an automobile.

Roswell's population density also is a factor. The City of Roswell is a vital retail, residential, and entertainment center and has a good deal of population density at the core and in the south and eastern parts of the City. Higher density residential areas in the central city, combined with commercial development, make the inner city census tracts more likely to experience traffic congestion (see Map 12.2).



Source: U.S. Census Bureau, Census 2000 Summary File 1

Map 12.2
Population Density by Census Tract, 2000
City of Roswell

CROSS-JURISDICTIONAL TRAFFIC

Although the preceding discussion of the transportation behavior of Roswell's residents is important, it is well known that Roswell's transportation issues are affected by adjacent cities, North Fulton County, and other parts of the Atlanta region, especially Cherokee County. Rapid increases in traffic congestion on the City's roadway network during the last ten years have had a profound impact on residents and businesses, as well as the local economy. While traffic growth is attributable to new development and redevelopment that has occurred inside the City, there is also traffic generated from people in other jurisdictions that pass through Roswell. There are a number of large office buildings and technology complexes located north of the City in Alpharetta (such as Windward) and in unincorporated Fulton County (such as Johns Creek). Therefore, the number of peak period trips emanating from the City to other employment centers has increased over time. In addition, off-peak trips internal to the City have likely also increased. The magnitude of the problem becomes clear when one examines the data and realizes that the amount of vehicle miles traveled in the region increased 72 percent from 1980 to 2000, while the amount of road mileage/capacity held almost steady. (Roadway lane-miles increased by only 3.6 percent in the region during the same time period, according to the Bureau of Transportation Statistics.)

The City's transportation planning consultants in 1999-2000 assessed the impact that growth in surrounding communities has on Roswell's road system by studying the traffic passing through the City on major thoroughfares. This was accomplished by closely examining the transportation

patterns from the TAZs emanating within Roswell and outside of the City limits. Results from this investigation are shown in Table 12.5.

Table 12.5
Estimated Year 2000 to 2020 Pass-Through Traffic,
Selected Major Roads, City of Roswell

Road Name	Location (City Border)	Years/ Change	Daily Pass- Through Traffic Volume	Pass- Through Share	Daily Local Traffic Volume	Total Daily Traffic
Woodstock Road(SR 92)	At Cobb County Border	Yr. 2000	34,330	48%	36,871	71,201
		Yr. 2020	41,576	47%	46,058	87,634
		% Change	21%	NA	25%	23%
Houze Road (SR 140)	North of Crabapple	Yr. 2000	6,116	28%	15,808	21,924
		Yr. 2020	12,713	45%	15,777	28,490
		% Change	108%	NA	0%	30%
Alpharetta Highway (SR 9/SR120)	North of Hembree Road	Yr. 2000	5,845	26%	16,306	22,151
		Yr. 2020	14,340	34%	27,852	42,192
		% Change	145%	NA	71%	90%
Holcomb Bridge Road (SR 140)	East of Nesbit Ferry Road	Yr. 2000	13,249	22%	47,654	60,903
		Yr. 2020	17,332	22%	60,893	78,225
		% Change	31%	NA	28%	28%
South Atlanta Street (SR 9)	North of Chattahoochee River	Yr. 2000	18,543	42%	25,817	44,360
		Yr. 2020	22,656	38%	37,755	60,411
		% Change	22%	NA	46%	36%
Marietta Highway (SR 120)	Cobb County Line	Yr. 2000	14,664	39%	22,717	37,381
		Yr. 2020	19,536	42%	27,184	46,720
		% Change	33%	NA	20%	25%
Pine Grove Road	East of Shallowford Road	Yr. 2000	6,751	43%	9,001	15,752
		Yr. 2020	6,864	36%	12,153	19,017
		% Change	2%	NA	35%	21%

Source: Fulton County Travel Model

Crossville Road (SR 92), which links Roswell and Cobb and Cherokee counties, has the highest percentage of “through” traffic in the City. Approximately 71,200 vehicles per day traveled into and out of Roswell on this stretch of highway in 2000. Of those, 34,330 or 48 percent were “through” trips because they do not make any stops within the City’s boundaries. Other entry and exit facilities having a high percentage of “through” trips in 2000 were South Atlanta Street (SR 9), Marietta Highway (SR 120), and Pine Grove Road.

In the future, Houze Road (SR 140) is expected to double in terms of “through” traffic, from 6,116 in 2000 to 12,713 in 2020. Modeling results show that the projected influx of new residences in Cherokee County will have a particularly large impact on Houze Road (SR 140). The relative share of “through” trips is expected to change from 28 percent in 2000 to 45 percent in 2020. If significant regional improvements are not made to alter major traffic patterns, little will change by 2025.

COUNTY ROAD SYSTEM OVERVIEW

Fulton County contains a 5.9 mile stretch of Interstate 285, as well as other interstate highways including I-75 and I-85. The lane miles of roadways in Fulton County are shown by type of road mileage in Table 12.6.

Table 12.6
Fulton County Road Miles by Type of Road

Road Type	Miles	Percentage
State Roads	387.10	11.3%
County Roads	1246.61	36.3%
City Streets	1798.65	52.4%
Total Roads	3432.36	100%

Source: DOT 441 Report 12/31/2002

FUNCTIONAL CLASSIFICATION OF STREETS

In order to assess the adequacy of a transportation system, it is necessary to inventory various roadways according to the degree to which they fulfill two purposes: movement of traffic and access to facilities. These functions are inversely related, in that the more traffic volume a roadway can accommodate, the less access it provides (and vice versa). A functional classification describes the degree to which a particular roadway provides mobility and access. Many of the roads in the City are two lanes. However, if capacity improvements are made in the future, consideration of limited access roadways or divided roadways might be worthy of discussion. In addition, the volumes of traffic later in the planning horizon might warrant a change in roadway design. No recent legal changes have taken place regarding functional classification, but the Transportation Department would like to see some roads upgraded one class. The functional classification at its most basic level includes freeways (limited access throughways), arterials, collectors, and local streets.

Map 12.3 provides a citywide view of the arterial (solid lines) and collector (dashed lines) system. All other roads are local roads. In addition, the inventory of roads in this chapter provides the functional classification of the most significant roads in Roswell. The classifications are based on traffic volumes. Note also that the functional classification can change over time, as improvements are made.

It is appropriate to consider a more detailed functional classification which provides more than one class of arterials and collector streets, as described in the paragraphs below.

FUNCTIONAL CLASSIFICATION OF ROADS



Map 12.3
Basic Functional Classification of Roads

Freeway

A freeway is a multi-lane controlled access road which only allows access at designated interchanges. The purpose of the freeway is to transport people and goods over long distances at high speeds with a minimum amount of friction from entering and exiting traffic. Freeways typically have average daily traffic volumes of over 100,000 vehicles per day. Georgia 400 is the only freeway directly serving Roswell.

Principal Arterial

A principal arterial is used to transport large volumes of traffic at moderate speeds and usually consist of multiple lanes. These roads provide immediate access to adjacent land uses through driveways and two-way-left-turn lanes or raised medians in the center of the multi-lane arterial. A principal arterial is designed for capacity ranging from 45,000 to 75,000 vehicles per day. It is desirable for major arterials to have right-of-way widths of 120 feet, which allows for six lanes, sidewalks on both sides, and a 20-foot median. Crossville Road (SR 92) and Holcomb Bridge Road (SR 140) are prime examples of principal arterials.

Minor Arterial

A minor arterial is designed to provide cross-town and cross-county street access. These roadways are usually multi-lane, although in some less developed areas they may be two-lane roads. With access to development, there are often driveways that run directly into thoroughfares and, occasionally, on-street parking. Typical right-of-way widths are between 70 and 90 feet (with extra right-of-way for turn lanes within 500 feet of major intersections). Minor arterials carry between 20,000 and 50,000 vehicles per day.

Major Collectors

A major collector is designed to move traffic from residential areas and other local traffic generators such as schools, parks, office, and retail areas to principal and minor arterials. Generally these are two- to four-lane roads with frequent intersections. Traffic volumes are typically between 15,000 and 30,000 vehicles per day. Collectors usually have 60-80 foot wide rights-of-way.

Minor Collectors

Minor collectors are roads designated to collect traffic from local networks of city streets and county roads and transport this traffic to the arterial system. Minor collectors are typically two- to four-lane facilities with an average daily traffic between 7,500 and 15,000 vehicles. For minor collectors, a 60-foot right-of-way is desirable.

Local Roads and Streets

Local roads exist primarily to provide access to adjacent land. They serve low-mileage trips compared to collectors and arterials. Use of these roads and streets for through traffic is discouraged. Local roads and streets include all of the road mileage not classified as part of the principal arterial, minor arterial, or collector system.

UNDERSTANDING LEVELS OF SERVICE FOR ROADS

The current transportation system levels of service (LOS) and system needs are based upon existing design and operating capacities for the year 2005. Levels of service (LOS) were estimated for segments by calculating the ratio of daily traffic volume to the segment's equivalent daily capacity.⁴ Levels of service are indicated by letter grades "A" through "F" which were assigned to each link in accordance with its computed volume-to-capacity ratio.

At one extreme, LOS "A" signifies that motorists travel with little or no delay and have room to maneuver as they approach an intersection at the downstream end of a segment. At the other extreme, LOS "E" denotes that the volume of traffic is approaching the capacity threshold. LOS "E" is characterized by low average speeds and delay at intersections and little room to maneuver. Following LOS "E" is LOS "F". LOS "F" conditions occur when there is more traffic attempting to pass through an intersection or section of road than the intersection or segment is designed to accommodate. These points or short sections are referred to as "bottlenecks". LOS "F" conditions are characterized by long delays between intersections, low average speeds, and little room to maneuver. Levels of service are also described in terms of their corresponding volume-to-capacity ratios and average speeds for urban arterial roads in Table 12.7.

Table 12.7
Levels-of-Service for Urban Arterials

Level-of-Service	Volume-to-Capacity	Avg. Travel Speed (mph)
A	< 0.50	□ 35
B	0.50 – 0.60	□ 28
C	0.60 – 0.75	□ 22
D	0.75 – 0.90	□ 17
E	0.90 – 1.00	□ 13
F	□ 1.00	< 13

Source: Institute of Transportation Engineers

HIGHWAY AND ROAD INVENTORY AND ASSESSMENT

An inventory of roadway link geometry, including functional classification and levels of service for the major road system was conducted by the City's planning consultants as part of the 2020 Comprehensive Plan. Roswell used travel demand modeling data provided by Fulton County for this purpose and as a way to determine a priority list of projects.

The City of Roswell's thoroughfare system (freeways, arterials, and collectors) is inventoried and assessed in Table 12.8. Highways and roads are listed alphabetically by road name. Data include functional classification, number of lanes, estimated daily capacity, 2005 estimated daily traffic volume,⁵ computed volume-capacity ratio, and level of service by letter grade "A" through "F." In addition, Table 12.8 provides estimated daily traffic volume, computed volume-capacity

⁴ The 2020 Comprehensive Plan only rated highways and roads as C or better, D, E, and F.

⁵ Year 2005 data were determined by model in the year 2000 in the 2020 Comprehensive Plan. The estimates do not necessarily reflect current (actual) conditions but they are reasonable estimates.

ratio, and level of service by letter grade for the year 2020. This allows for a comparison of 2005 and 2020 levels of service.

There are 36 different road facilities and 140 segments listed in the table. A principal arterial facility like Crossville Road/Holcomb Bridge Road is comprised of numerous segments in the table. Elkins Road, a collector street, is represented with just one segment in the table.

It is important to note that the City's transportation planning consultants in 2000 (2020 Comprehensive Plan) made certain assumptions about future improvements to the transportation network. Those assumptions were made, and data produced, for modeling purposes. If a given segment shows that it was assumed to be improved from two to four lanes, for instance, that modeling decision in itself is not an expression of policy (i.e., that such road improvement is included as a scheduled improvement).

Table 12.8
Highway and Road Levels-of-Service, 2005 and 2020

Street	From	To	Functional Class	No. of Lanes 2005	Daily Capacity (C) 2005	Daily Volume (V) 2005	Daily Volume (V) 2020	V/C Ratio 2005	V/C Ratio 2020	LOS 2005	LOS 2020
Alpharetta Highway/ SR9	Upper Hembree Rd.	Hembree Rd.	Principal Arterial	4	39,600	35,800	49,900	0.90	1.26	E	F
Alpharetta Highway/ SR9	Hembree Rd.	Sun Valley Dr.	Principal Arterial	4	39,600	32,100	54,400	0.81	1.37	D	F
Alpharetta Highway/ SR9	Sun Valley Dr.	Houze Way	Principal Arterial	4	39,600	35,600	56,900	0.90	1.44	D	F
Alpharetta Highway/ SR9	Houze Way	SR 140/Mansell Rd.	Principal Arterial	4	39,600	39,000	59,900	0.98	1.51	E	F
Alpharetta Highway/ SR9	SR 140/Mansell Rd.	Commerce Pkwy.	Principal Arterial	4	39,600	45,000	61,000	1.11	1.54	F	F
Alpharetta Highway/ SR9	Commerce Pkwy.	SR 140/Holcomb Bridge	Principal Arterial	4	39,600	48,600	63,100	1.23	1.59	F	F
Alpharetta Highway/ SR9	SR 140/Holcomb Bridge Rd.	Woodstock St.	Principal Arterial	4	39,600	38,500	55,700	0.97	1.41	E	F
Alpharetta Street/ SR 9	Woodstock St.	Norcross St.	Principal Arterial	4	39,600	34,400	56,300	0.87	1.42	D	F
Alpharetta Street/ SR 9	Norcross St.	Canton St.	Principal Arterial	4	39,600	43,400	65,800	1.10	1.66	F	F
Atlanta Street/ SR 9	Canton St./ Magnolia St.	Oak St.	Principal Arterial	4	39,600	55,600	63,700	1.40	1.61	F	F
Atlanta Street/ SR 9	Oak St.	Sloan St./Park Sq.	Principal Arterial	4	39,600	60,100	67,400	1.52	1.70	F	F
Atlanta Street/ SR 9	Sloan St./Park Sq.	SR120/Marietta Hwy./Mill St.	Principal Arterial	4	39,600	62,200	73,200	1.57	1.85	F	F
Atlanta Street/ SR 9	SR120/Marietta Hwy./Mill St.	Azalea Dr./ Riverside Rd.	Principal Arterial	3	39,600	47,200	55,100	1.19	1.39	F	F
Azalea Drive	Roswell Road/SR 9	Atlanta Rowing Club	Major Collector	2	16,200	9,700	8,400	0.60	0.52	C	C
Azalea Drive	Atlanta Rowing Club	Willeo Road	Major Collector	2	16,200	4,900	3,700	0.30	0.23	C	C
Bowen Road	Woodstock Rd.	Jones Rd.	Collector	2	16,200	2,500	6,700	0.15	0.41	C	C
Canton Street	Woodstock St.	SR9/Atlanta/ Magnolia	Minor Arterial	2	19,800	22,100	25,600	1.12	1.29	F	F
Chaffin Road	Hardscrabble Rd.	Hembree Rd.	Collector	2	16,200	10,300	10,500	0.64	0.65	C	C
Chaffin Road	Hembree Rd.	Crabapple Rd.	Collector	2	16,200	4,500	6,000	0.28	0.37	C	C
Coleman Road	Marietta Hwy./ SR120	W. Willeo Rd.	Major Collector	2	16,200	6,000	18,200	0.37	1.12	C	F
Coleman Road	E. Willeo Rd.	Hightower Rd.	Major Collector	2	16,200	9,100	19,400	0.56	1.20	C	F
Coleman Road	Hightower Rd.	Magnolia/Pine Grove Rd.	Major Collector	2	16,200	8,000	17,300	0.49	1.07	C	F

Street	From	To	Functional Class	No. of Lanes 2005	Daily Capacity (C) 2005	Daily Volume (V) 2005	Daily Volume (V) 2020	V/C Ratio 2005	V/C Ratio 2020	LOS 2005	LOS 2020
Commerce Parkway	Alpharetta Hwy./ SR9	Old Roswell Rd.	Collector	2	39,600	12,000	11,000	0.30	0.28	C	C
Commerce Parkway (West Extension)	Alpharetta Hwy./ SR9	Mansell Rd.	Collector	4 (2020)	39,600 (2020)	--	13,000	--	0.33	--	C
Commerce Parkway (East Extension)	Old Roswell Rd.	Holcomb Bridge Rd./ SR140	Collector	2 (2020)	16,200 (2020)	--	10,500	--	0.65	--	C
Cox Road	Lackey Rd.	Brookfield Pkwy.	Major Collector	2	16,200	2,300	4,600	0.14	0.28	C	C
Cox Road	Brookfield Pkwy.	King Rd.	Major Collector	2	16,200	2,900	4,900	0.18	0.30	C	C
Crabapple Road	Hardscrabble Rd.	Etris Rd.	Minor Arterial	2	19,800	5,400	11,200	0.27	0.57	C	C
Crabapple Road	Etris Rd.	Hembree Rd.	Minor Arterial	2	19,800	10,000	20,300	0.51	1.03	C	F
Crabapple Road	Hembree Rd.	Houze Way	Minor Arterial	2	19,800	8,800	17,800	0.44	0.90	C	D
Crabapple Road	Houze Way	Crossville Rd.	Minor Arterial	2	19,800	10,900	22,300	0.55	1.13	C	F
Crabapple Road	Crossville Rd.	Woodstock St.	Minor Arterial	2	19,800	15,000	23,200	0.76	1.17	D	F
Crossville Road/ Woodstock/ SR92	Mabry Rd.	Wildwood Springs Dr./Steeple Run	Principal Arterial	6	59,400	80,300	82,600	1.35	1.39	F	F
Crossville Road/ Woodstock/ SR92	Wildwood Springs Dr./Steeple Run	Westwind Blvd.	Principal Arterial	6	59,400	78,200	79,700	1.32	1.34	F	F
Crossville Road/ Woodstock/ SR92	Westwind Blvd.	Bowen Rd./Mountain Park Road	Principal Arterial	6	59,400	78,400	79,800	1.32	1.34	F	F
Crossville Road/ Woodstock/ SR92	Bowen Rd./ Mountain Park Rd.	Hardscrabble Rd.	Principal Arterial	6	59,400	82,400	88,500	1.39	1.49	F	F
Crossville Road/ Woodstock/ SR92	Hardscrabble Rd.	Woodstock Rd./ King Rd.	Principal Arterial	6	59,400	57,000	62,800	0.96	1.06	E	F
Crossville Road/ Woodstock/ SR92	Woodstock Rd./ King Rd.	Crabapple Rd.	Principal Arterial	6	59,400	59,900	67,900	1.01	1.14	F	F
Crossville Road/ Woodstock/ SR92	Crabapple Rd.	Mansell Rd.	Principal Arterial	6	59,400	64,700	75,300	1.09	1.27	F	F
Crossville Road/ Woodstock/ SR92	Mansell Rd.	Holcomb Bridge/SR140	Principal Arterial	6	59,400	54,700	60,500	0.92	1.02	E	F
Dogwood Road	Riverside Rd.	Grimes Bridge Rd.	Collector	2 (4 in 2020)	16,200 (32,400 in 2020)	7,700	10,900	0.48	0.34	C	C
Dogwood Road	Grimes Bridge Rd.	Holcomb Bridge Rd.	Collector	2	16,200	4,000	8,900	0.25	0.55	C	C
Elkins Road	Hembree Rd.	Alpharetta Hwy./ SR9	Collector	2	16,200	11,500	13,000	0.71	0.80	C	D
Etris Road	Cox Rd.	Kent Rd.	Collector	2	16,200	1,300	5,200	0.08	0.32	C	C
Etris Road	Kent Rd.	Hardscrabble Rd.	Collector	2	16,200	4,000	7,700	0.25	0.48	C	C
Etris Road	Hardscrabble Rd.	Crabapple Rd.	Collector	2	16,200	3,800	7,200	0.23	0.44	C	C
Georgia 400	Mansell Rd.	Holcomb Bridge Rd./ SR140	Freeway	6	120,000	124,200	153,000	1.04	1.28	F	F

Street	From	To	Functional Class	No. of Lanes 2005	Daily Capacity (C) 2005	Daily Volume (V) 2005	Daily Volume (V) 2020	V/C Ratio 2005	V/C Ratio 2020	LOS 2005	LOS 2020
Georgia 400	Holcomb Bridge Rd./ SR140	Northridge	Freeway	8	160,000	168,400	189,400	1.05	1.18	F	F
Grimes Bridge Road	SR140/ Holcomb Bridge Rd.	Norcross St/ Warsaw Rd.	Major Collector	2 (4 in 2020)	16,200 (32,400 in 2020)	9,300	11,200	0.29	0.35	C	C
Grimes Bridge Road	Norcross St/ Warsaw Rd.	Shadowbrook Dr.	Major Collector	2	16,200	5,200	6,900	0.32	0.43	C	C
Grimes Bridge Road	Shadowbrook Dr.	Vickery Ln.	Major Collector	2	16,200	3,500	10,200	0.22	0.63	C	C
Grimes Bridge Road	Vickery Ln.	Dogwood Rd.	Major Collector	2	16,200	4,400	10,400	0.27	0.64	C	C
Hardscrabble Road	Crabapple Rd.	Etris Rd.	Minor Arterial	2	19,800	17,800	17,600	0.90	0.89	D	D
Hardscrabble Road	Etris Rd.	King Rd.	Minor Arterial	2	19,800	27,000	26,000	1.36	1.31	F	F
Hardscrabble Road	King Rd.	SR92/ Woodstock Rd.	Minor Arterial	2	19,800	26,100	27,100	1.32	1.37	F	F
Hembree Road	Haynes Bridge	Maxwell Rd.	Minor Arterial	2	19,800	8,100	8,800	0.41	0.44	C	C
Hembree Road	Maxwell Rd.	Wills Rd.	Minor Arterial	2	19,800	11,200	13,000	0.57	0.66	C	C
Hembree Road	Wills Rd.	SR9/ Alpharetta Hwy.	Minor Arterial	2	19,800	17,600	19,800	0.89	1.00	D	F
Hembree Road	SR9/ Alpharetta Hwy.	Elkins Rd.	Minor Arterial	2	19,800	17,900	16,800	0.90	0.85	E	D
Hembree Road	Elkins Rd.	Upper Hembree Rd.	Minor Arterial	2	19,800	17,900	17,000	0.90	0.86	E	D
Hembree Road	Upper Hembree Rd.	SR140/Houze Rd.	Minor Arterial	2	19,800	22,200	22,100	1.12	1.12	F	F
Hembree Road	SR140/ Houze Rd.	Crabapple Rd.	Minor Arterial	2	19,800	15,600	13,700	0.79	0.69	D	C
Holcomb Bridge Road/SR140	SR9/ Alpharetta Hwy.	Grimes Bridge Rd./Old Roswell Rd.	Principal Arterial	6	59,400	66,300	73,500	1.12	1.24	F	F
Holcomb Bridge Road/SR140	Grimes Bridge Rd./ Old Roswell Rd.	Warsaw Rd.	Principal Arterial	6	59,400	71,700	92,800	1.21	1.56	F	F
Holcomb Bridge Road/SR140	Warsaw Rd.	Dogwood Rd.	Principal Arterial	6	59,400	90,700	95,300	1.53	1.60	F	F
Holcomb Bridge Road/SR140	Dogwood Rd.	Old Dogwood Rd.	Principal Arterial	6	59,400	91,400	96,900	1.54	1.63	F	F
Holcomb Bridge Road/SR140	Old Dogwood Rd.	Southbound GA 400 Ramps	Principal Arterial	6 (8 in 2020)	59,400 (79,200 in 2020)	91,400	100,500	1.54	1.27	F	F

Street	From	To	Functional Class	No. of Lanes 2005	Daily Capacity (C) 2005	Daily Volume (V) 2005	Daily Volume (V) 2020	V/C Ratio 2005	V/C Ratio 2020	LOS 2005	LOS 2020
Holcomb Bridge Road/SR140	Northbound GA 400 Ramps	Market Blvd.	Principal Arterial	4	39,600	78,800	95,600	1.99	2.41	F	F
Holcomb Bridge Road/SR140	Market Blvd.	Old Alabama Rd.	Principal Arterial	4	39,600	72,900	85,800	1.84	2.17	F	F
Holcomb Bridge Road/SR140	Old Alabama Rd.	Holcomb Woods Pkwy.	Principal Arterial	4	39,600	55,000	61,900	1.39	1.56	F	F
Holcomb Bridge Road/SR140	Holcomb Woods Pkwy.	Martin's Landing Dr./ Terramont Dr.	Principal Arterial	4	39,600	58,700	63,200	1.48	1.60	F	F
Holcomb Bridge Road/SR140	Martin's Landing Dr./ Terramont Dr.	Eves Rd.	Principal Arterial	4	39,600	53,800	57,200	1.36	1.44	F	F
Holcomb Bridge Road/SR140	Eves Rd.	Fouts Rd.	Principal Arterial	4	39,600	62,700	71,300	1.58	1.80	F	F
Holcomb Bridge Road/SR140	Fouts Rd.	Steeplechase Dr.	Principal Arterial	4	39,600	54,300	63,100	1.37	1.59	F	F
Holcomb Bridge Road/SR140	Steeplechase Dr.	Nesbit Ferry Rd.	Principal Arterial	4	39,600	48,900	57,400	1.23	1.45	F	F
Holcomb Bridge Road/SR140	Nesbit Ferry Rd.	Barnwell Rd.	Principal Arterial	4	39,600	64,200	77,100	1.62	1.95	F	F
Holcomb Bridge Road/SR140	Barnwell Rd.	Gwinnett Co. border	Principal Arterial	4	39,600	76,300	92,000	1.93	2.32	F	F
Houze Road/SR 140	Crabapple Rd.	Rucker Rd.	Principal Arterial	2	19,800	23,000	26,600	1.16	1.34	F	F
Houze Road/SR 140	Rucker Rd.	Hembree Rd.	Principal Arterial	2	19,800	27,700	33,100	1.40	1.67	F	F
Houze Road/SR 140	Hembree Rd.	Houze Way	Principal Arterial	2	19,800	21,800	25,700	1.10	1.30	F	F
Houze Road/SR 140	Houze Way	Mansell Rd.	Principal Arterial	2	19,800	20,800	24,200	1.05	1.22	F	F
Jones Road	Cobb Co. border	Bowen Rd.	Collector	2	16,200	7,400	12,100	0.46	0.75	C	C
Jones Road	Bowen Rd.	Shallowford Rd.	Collector	2	16,200	7,000	7,900	0.43	0.49	C	C
Jones Road	Shallowford Rd.	Woodstock Rd.	Major Collector	2	16,200	8,600	10,300	0.53	0.64	C	C
King Road	Brookfield Pkwy.	Hardscrabble Rd.	Major Collector	2	16,200	8,500	15,300	0.52	0.94	C	E
King Road	Hardscrabble Rd.	Crossville Rd./ SR92	Major Collector	2	16,200	12,500	16,700	0.77	1.03	D	F
Mansell Road (East)	Northpoint Pkwy.	Old Alabama Conn.	Principal Arterial	4	39,600	23,000	34,200	0.58	0.86	C	D
Mansell Road (East)	Old Alabama Conn.	Haynes Bridge Rd.	Principal Arterial	4	39,600	16,300	19,400	0.41	0.49	C	C
Mansell Road (East)	Alpharetta St./SR9	Crossville Rd./SR92	Principal Arterial	4 in 2020	39,600 in 2020	--	32,500	--	0.82	--	D
Mansell Road (West)	Crossville Rd./ SR92	Houze Rd. / SR140	Principal Arterial	4	39,600	35,800	61,000	0.90	1.54	E	F
Mansell Road (West)	Houze Rd./SR140	Alpharetta Hwy./SR9	Principal Arterial	4 (6 in 2020)	39,600 (59,400 in 2020)	30,700	61,500	0.78	1.04	D	F

Street	From	To	Functional Class	No. of Lanes 2005	Daily Capacity (C) 2005	Daily Volume (V) 2005	Daily Volume (V) 2020	V/C Ratio 2005	V/C Ratio 2020	LOS 2005	LOS 2020
Mansell Road (West)	Eagles Crest Village Ln.	Old Roswell Rd.	Principal Arterial	4 (6 in 2020)	39,600 (59,400 in 2020)	41,400	53,600	1.05	0.90	F	E
Marietta Hwy. (SR120)	Cobb Co. border	Coleman Rd.	Principal Arterial	4	39,600	39,800	46,800	1.01	1.18	F	F
Marietta Hwy. (SR120)	Coleman Rd.	Willeo Rd.	Principal Arterial	4	39,600	33,200	30,600	0.84	0.77	D	D
Marietta Hwy. (SR120)	Willeo Rd.	Atlanta St. /SR9	Principal Arterial	4	39,600	50,200	50,300	1.27	1.27	F	F
Mimosa Boulevard	Magnolia St.	Marietta Hwy./ SR120	Collector	2	16,200	5,500	9,500	0.34	0.59	C	C
Mimosa Boulevard Extension	Pine Grove Rd./ Magnolia St.	Canton St.	Collector	2	16,200	2,000	2,500	0.12	0.15	C	C
Mountain Park Rd.	Oakhaven Dr.	Woodstock Rd/ SR92	Major Collector	2	16,200	4,500	5,900	0.28	0.36	C	C
Nesbit Ferry Road	Old Alabama Rd.	Scott Rd.	Major Collector	2	16,200	24,100	26,100	1.49	1.61	F	F
Nesbit Ferry Road	Scott Rd.	Brumbelow Rd.	Major Collector	2	16,200	10,700	12,400	0.66	0.77	C	D
Nesbit Ferry Road	Brumbelow Rd.	Rivermont Pkwy.	Major Collector	2	16,200	11,100	15,600	0.69	0.96	C	E
Nesbit Ferry Road	Rivermont Pkwy.	Holcomb Bridge Rd.	Major Coll.	2	16,200	14,300	18,800	0.88	1.16	D	F
Norcross Street/ Warsaw Rd.	Alpharetta St. /SR9	Forrest St./ Frazier St.	Major Collector	2	16,200	12,300	14,500	0.76	0.90	D	D
Norcross Street/ Warsaw Road	Forrest St./ Frazier St.	Grimes Bridge Rd.	Major Collector	2	16,200	10,800	10,700	0.67	0.66	C	C
Norcross Street/ Warsaw Road	Grimes Bridge Rd.	Holcomb Bridge Rd./ SR140	Major Collector	2	16,200	14,600	13,500	0.90	0.83	E	D
Norcross Street/ Warsaw Road	Holcomb Bridge Rd./ SR140	Old Roswell Rd.	Major Collector	2	16,200	9,400	10,800	0.58	0.67	C	C
Old Alabama Road	Riverside Rd.	Market Blvd.	Major Collector	4	32,400	8,000	8,300	0.25	0.26	C	C
Old Alabama Road	Market Blvd.	Holcomb Bridge Rd.	Major Collector	4	32,400	9,600	10,800	0.30	0.33	C	C
Old Alabama Road	Holcomb Bridge Rd.	Holcomb Woods Pkwy.	Principal Arterial	2	19,800	25,200	34,400	1.27	1.74	F	F
Old Alabama Road	Holcomb Woods Pkwy	Wooten Rd.	Principal Arterial	2	19,800	13,800	26,500	0.70	1.34	C	F
Old Alabama Road	Wooten Rd	Old Alabama Rd. Connector	Principal Arterial	2	19,800	14,800	19,800	0.75	1.00	C	F
Old Alabama Road	Old Alabama Rd. Connector	Roxburgh Dr.	Principal Arterial	2 (4 in 2020)	19,800 (39,600 in 2020)	27,200	37,200	1.37	0.94	F	E
Old Alabama Road	Old Alabama Rd. Connector	Nesbit Ferry Rd.	Principal Arterial	2 (4 in 2020)	19,800 (39,600 in 2020)	27,200	37,200	1.37	0.94	F	F
Old Roswell Road	Holcomb Bridge	Commerce Pkwy.	Major Collector	2 (4 in 2020)	16,200 (32,400 in 2020)	11,100	10,100	0.68	0.31	C	C

Street	From	To	Functional Class	No. of Lanes 2005	Daily Capacity (C) 2005	Daily Volume (V) 2005	Daily Volume (V) 2020	V/C Ratio 2005	V/C Ratio 2020	LOS 2005	LOS 2020
Old Roswell Road	Commerce Pkwy.	Warsaw Rd.	Major Collector	2 (4 in 2020)	16,200 (32,400 in 2020)	7,500	10,800	0.46	0.33	C	C
Old Roswell Road	Warsaw Rd.	Mansell Rd.	Major Collector	2	16,200	9,000	11,500	0.56	0.71	C	C
Old Roswell Road	Mansell Rd.	Rock Mill Rd.	Major Collector	2	16,200	9,000	11,100	0.56	0.69	C	C
Oxbo Road	Atlanta St. /SR9	Grimes Bridge Rd.	Collector	2	16,200	2,400	7,700	0.15	0.48	C	C
Pine Grove Road / Magnolia Street	Cobb Co. Border	Shallowford Rd.	Minor Arterial	2	19,800	15,900	19,600	0.80	0.99	D	E
Pine Grove Road / Magnolia Street	Shallowford Rd.	Hightower Rd.	Minor Arterial	2	19,800	13,900	16,400	0.70	0.83	C	D
Pine Grove Road / Magnolia Street	Hightower Rd	Lake Charles Dr.	Minor Arterial	2	19,800	13,400	16,400	0.68	0.83	C	D
Pine Grove Road / Magnolia Street	Lake Charles Dr.	Coleman Rd.	Minor Arterial	2	19,800	14,300	15,800	0.72	0.80	C	D
Pine Grove Road / Magnolia Street	Coleman Rd.	Mimosa Blvd.	Major Collector	2	16,200	17,000	31,300	1.05	1.58	F	F
Pine Grove Road / Magnolia Street	Mimosa Blvd.	Canton St.	Major Collector	2 (4 in 2020)	16,200 (39,600 in 2020)	19,700	34,300	1.22	0.87	F	D
Pine Grove Road / Magnolia Street	Canton St.	Alpharetta St. /SR9	Major Collector	2 (4 in 2020)	16,200 (39,600 in 2020)	18,200	36,600	1.12	0.92	F	E
Riverside Road	Atlanta St. /SR9	Dogwood Rd.	Major Collector	2	16,200	13,500	19,200	0.83	1.19	D	F
Riverside Road	Dogwood Rd.	Old Alabama Rd. Connector	Major Collector	2 (4 in 2020)	16,200 (32,400 in 2020)	6,600	24,500	0.41	0.76	C	D
Riverside Road	Old Alabama Rd. Connector	Eves Rd.	Major Collector	2	16,200	10,500	21,700	0.65	1.34	C	F
Scott Road	Nesbit Ferry Rd.	Centennial H. S.	Collector	2	16,200	10,700	16,500	0.66	1.02	C	F
Scott Road	Centennial H. S.	Holcomb Bridge Rd.	Collector	2	16,200	10,100	4,400	0.62	0.27	C	C
Sun Valley Drive	E. of Alpharetta Hwy./SR9		Major Collector	2	16,200	--	1,700	--	0.10	--	C
Sun Valley Drive Extension	N. of Mansell Rd.		Major Collector	2	16,200	--	6,200	--	0.38	--	C
Willeo Road	Cobb Co. Border	Azalea Dr.	Major Collector	2	16,200	16,100	11,700	0.99	0.72	E	C
Willeo Road	Azalea Dr.	Marietta Hwy./SR120	Major Collector	2	16,200	8,200	14,300	0.51	0.88	C	D
Willeo Road	Marietta Hwy./SR120	Coleman Rd	Major Collector	2	16,200	9,900	9,900	0.61	0.61	C	C
Willeo Road	Coleman Rd	Coleman Rd	Major Collector	2	16,200	10,000	23,800	0.62	1.47	C	F
Willeo Road	Coleman Rd	Cobb Co. Border	Major Collector	2	16,200	7,900	6,800	0.49	0.42	C	C
Woodstock Road	Crossville Rd./SR120	Jones Rd.	Major Collector	2	16,200	10,000	11,100	0.62	0.69	C	C

Street	From	To	Functional Class	No. of Lanes 2005	Daily Capacity (C) 2005	Daily Volume (V) 2005	Daily Volume (V) 2020	V/C Ratio 2005	V/C Ratio 2020	LOS 2005	LOS 2020
Woodstock Road	Jones Rd.	Roswell Area Park Dr.	Major Collector	2	16,200	10,000	12,400	0.62	0.77	C	D
Woodstock Road	Roswell Area Park Dr.	Canton St/ Crabapple Rd.	Major Collector	2	16,200	9,000	10,400	0.56	0.64	C	C
Woodstock Road	Canton St/ Crabapple Rd.	Alpharetta St. /SR9	Major Collector	2	16,200	4,100	11,600	0.25	0.72	C	C

Source: PBS&J 2000 (2020 Comprehensive Plan); Reformatted by Jerry Weitz & Associates, Inc. March 2005 to combine 2005 and 2020 data.

The road segments with the worst capacity deficiencies projected in the year 2020 are shown in rank order in Table 12.9. Each highway or road segment listed in Table 12.9 is projected to carry at least 1.5 times (in some cases, double) the capacity of the highway or road. With the exception of Mansell Road and Pine Grove Road, all of the highway/road segments listed in Table 12.9 are state routes. This ranking should be useful to the Georgia Department of Transportation and Roswell Department of Transportation as they considers ways to reduce the worst capacity deficiencies in the City's highway and road network.

Table 12.9
Rank Order of Highway and Road Segments
With the Most Severe Capacity Limitations In 2020
(Volume/Capacity Ratio of 1.50 or More in the Year 2020)
City of Roswell

Street	From	To	Functional Class	Daily Volume (V) 2020	V/C Ratio 2020
Holcomb Bridge Road/SR140	Northbound GA 400 Ramps	Market Blvd.	Principal Arterial	95,600	2.41
Holcomb Bridge Road/SR140	Barnwell Rd.	Gwinnett Co. border	Principal Arterial	92,000	2.32
Holcomb Bridge Road/SR140	Market Blvd.	Old Alabama Rd.	Principal Arterial	85,800	2.17
Holcomb Bridge Road/SR140	Nesbit Ferry Rd.	Barnwell Rd.	Principal Arterial	77,100	1.95
Atlanta Street/SR 9	Sloan St./Park Sq.	SR120/Marietta Hwy./Mill St.	Principal Arterial	73,200	1.85
Holcomb Bridge Road/SR140	Eves Rd.	Fouts Rd.	Principal Arterial	71,300	1.80
Old Alabama Road	Holcomb Bridge Rd.	Holcomb Woods Pkwy.	Principal Arterial	34,400	1.74
Atlanta Street/ SR 9	Oak St.	Sloan St./Park Sq.	Principal Arterial	67,400	1.70
Houze Road/SR 140	Rucker Rd.	Hembree Rd.	Principal Arterial	33,100	1.67
Alpharetta Street/SR 9	Norcross St.	Canton St.	Principal Arterial	65,800	1.66
Holcomb Bridge Road/SR140	Dogwood Rd.	Old Dogwood Rd.	Principal Arterial	96,900	1.63
Atlanta Street/SR 9	Canton St./ Magnolia St.	Oak St.	Principal Arterial	63,700	1.61
Holcomb Bridge Road/SR140	Warsaw Rd.	Dogwood Rd.	Principal Arterial	95,300	1.60
Holcomb Bridge Road/SR140	Holcomb Woods Pkwy.	Martin's Landing Dr./ Terramont Dr.	Principal Arterial	63,200	1.60
Alpharetta Highway/SR9	Commerce Pkwy.	SR 140/Holcomb Bridge	Principal Arterial	63,100	1.59
Holcomb Bridge Road/SR140	Fouts Rd.	Steeplechase Dr.	Principal Arterial	63,100	1.59
Pine Grove Road / Magnolia Street	Coleman Rd.	Mimosa Blvd.	Major Collector	31,300	1.58
Holcomb Bridge Road/SR140	Grimes Bridge Rd./ Old Roswell Rd.	Warsaw Rd.	Principal Arterial	92,800	1.56
Holcomb Bridge Road/SR140	Old Alabama Rd.	Holcomb Woods Pkwy.	Principal Arterial	61,900	1.56
Alpharetta Highway/SR9	SR 140/Mansell Rd.	Commerce Pkwy.	Principal Arterial	61,000	1.54
Mansell Road (West)	Crossville Rd./ SR92	Houze Rd. / SR140	Principal Arterial	61,000	1.54
Alpharetta Highway/SR9	Houze Way	SR 140/Mansell Rd.	Principal Arterial	59,900	1.51

Source: Compiled from Table 12.8, March 2005.

The following paragraphs describe how traffic increases will occur on highways and major (arterial and collector) local roads in Roswell between 2005 and 2020. Again, these findings were based on a model run in 2000. Roswell's Transportation Department should use its best professional judgment in considering the accuracy of these data, given changes that have occurred during the past five years since the model was run. The freeway and principal arterials are discussed first, followed by minor arterials and then the most significant collectors in the system.

Georgia 400

Georgia 400 operates at a level of service "F" in 2005 and is projected to continue operating at level of service "F" in 2020 with significantly higher V/C ratios. However, the 2000 Transportation Element did not include the widening of Georgia 400. The most congested segment (most over capacity) of Georgia 400 in Roswell by 2020 will be that part between Holcomb Bridge Road (SR 140) and the northern city limit line on GA 400.

One of the unintentional by-products of rapid growth in the Georgia 400 corridor has been an influx of "reverse commuters" to the Roswell/Alpharetta/North Fulton area. In fact, there is almost an equal amount of traffic northbound as southbound. Reverse commuters are those individuals traveling northbound on Georgia 400 in the morning and southbound in the evening. They travel in the off-peak direction, against the dominant commuter flow. Off-peak directional traffic has increased so fast in recent years that even motorists traveling against the prevailing flow face delays due to volumes approaching or in excess of capacity.

Crossville Road (SR 92) / Holcomb Bridge Road (SR 140)

Crossville Road/ Holcomb Bridge Road is the major east-west connector between Cobb County and Gwinnett County and interchanges with Georgia 400. From the Cobb County border in northwest Roswell to Georgia 400 in the middle of the city, it is a six-lane road. East of Georgia 400, the cross sectional design varies from four to five lanes. The roadway spans the entire east-west width of the City.

Almost every segment of the roadway operates at a LOS "F" in 2005 during the peak periods based on calculations from the travel model. By 2020, Crossville Road/ Holcomb Bridge Road will have five of the top six most capacity-constrained road segments in Roswell (see Table 12.9). In fact, 11 of the 22 road segments shown in Table 12.9 are Crossville Road or Holcomb Bridge Road. Three of the segments will by 2020 have V/C ratios higher than 2.00, meaning that they will be forced to accommodate twice the number of vehicles for which they were designed. However, an examination of GDOT count station data from 1997 through 2003 indicates the Holcomb Bridge Road corridor as a whole has experienced no significant growth in overall daily traffic volumes. This may be due to the fact that critical corridor intersections are experiencing saturated conditions during the peak hour, causing new trips to select alternative routes. (Source: 2005 Holcomb Bridge East Revitalization Study)

Alpharetta Highway/Alpharetta Street/Atlanta Street (SR 9)

This three, four and five-lane state principal arterial spans the north-south length of Roswell. It intersects with several other arterial facilities but not directly with Georgia 400. Motorists from north Roswell use this facility to access Georgia 400 south of the City because of congestion

along Holcomb Bridge Road and on Georgia 400 south of Holcomb Bridge Road. Operating conditions vary from being adequate to near gridlock.

Three segments of this roadway currently (in 2005) operate with V/C ratios higher than 1.50. The best levels-of-service are in the range of “D” on the northernmost sections of the route, near Alpharetta. As the facility approaches Holcomb Bridge Road from the direction of Alpharetta, traffic conditions change abruptly. Traffic from Houze Road (SR 140) and Mansell Road joins Alpharetta Highway at this point, and volumes on Alpharetta Highway exceed capacity. All sections of this facility will operate at LOS “F” in the year 2020. Worse yet, seven segments of this roadway will have V/C ratios in 2020 that are at 1.50 or above (see Table 12.9).

Houze Road (SR 140)

Houze Road is a two-lane principal arterial that connects the north, northwest sections of Roswell to Alpharetta Street, Holcomb Bridge Road and Mansell Road. Unlike Alpharetta Highway and Crossville Road/Holcomb Bridge Road, Houze Road is not lined with shopping centers and commercial businesses. During the peak travel periods, Houze Road is used by a large number of commuters from Cherokee County and North Fulton County. Beyond Roswell's northern boundary, Houze Road is designated Arnold Mill Road, which extends to Canton in Cherokee County.

As of 2005, all segments of Houze Road operate at a level of service “F.” The highest volume section is between Rucker Road and Hembree Road. South of Hembree Road, daily traffic volumes drop but not sufficiently to raise traffic conditions to a desirable level. The facility will remain well over its capacity in the year 2020. The section of Houze Road between Rucker Road and Hembree Road will be the ninth most congested road segment in Roswell (see Table 12.9) in 2020, according to the model results.

Marietta Highway (SR 120)

Marietta Highway is a four-lane principal arterial extending west from Roswell's Town Square in the Historic District into Cobb County. SR 120 is the principal east-west arterial facility through Marietta and Cobb County. Like the other major arterials in Roswell, it serves a relatively high percentage of motorists passing through the city. Two of the three segments of this roadway in Roswell operate at LOS “F” in 2005. Congestion and delays increase as eastbound Marietta Highway traffic intersects with Atlanta Street/SR 9 at Town Square/Mill Village. The LOS will remain/become “F” by 2020 except that segment between Coleman Road and Willeo Road, which will operate at LOS “D” in 2020.

Mansell Road

Mansell Road is a four and five-lane principal arterial that connects Crossville Road, Alpharetta Highway (SR 9), and Houze Road (SR 140) in the center of the city to Georgia 400. Mansell Road provides access to the Northpoint Mall shopping area and connects east and west Roswell. Although Mansell Road is a major arterial thoroughfare, traffic signals are closely spaced, and there are frequent driveways accessing commercial properties which limit its ability to provide convenient connectivity between east Roswell and west Roswell.

That segment between Houze Road and Alpharetta Highway is designated as State Route 140 (which goes south on SR 9 to Holcomb Bridge Road) and operates at LOS “F” in 2005. By 2020, this segment will operate at a V/C ratio of 1.54 (see Table 12.9). Other sections of

Mansell Road operate better than LOS “F” in 2005, and most other segments will operate at an acceptable LOS (i.e., a “D” grade) in 2020.

Old Alabama Road

Old Alabama Road is a three-lane major collector in east Roswell that connects subdivisions in northeast Roswell to Georgia 400 and shopping centers at Holcomb Bridge Road. In places it also has four lanes. It also provides access via Holcomb Bridge Road to Georgia 400 and shopping centers for many residents of Fulton County. It has connections to Haynes Bridge Road as well as to Mansell Road by way of the Old Alabama Connector.

Old Alabama Road between Holcomb Bridge Road and Holcomb Woods Parkway is the most congested segment and operates at LOS “F”, but other portions of Old Alabama Road northeast of Holcomb Bridge Road operate at acceptable LOS “C” in 2005. Most of Old Alabama Road northeast of Holcomb Bridge Road will operate at LOS “F” in 2020 according to the model. The segments of Old Alabama Road south of Holcomb Bridge Road operate at LOS “C” or better in 2005 and are projected to remain at that level in 2020.

Canton Street

Canton Street is a two-lane minor arterial that carries more than 20,000 vehicles a day and operates at LOS “F” in 2005. Conditions are projected to worsen from a V/C ratio of 1.12 in 2005 to 1.29 in the year 2020. This road is one of Roswell’s signature historic streetscapes, with low speeds and brick paver crosswalks.

Crabapple Road

Crabapple Road is a mostly two-lane minor arterial, although it has more capacity as it approaches Crossville Road. Almost all of the minor arterial has an acceptable LOS “C” in 2005. However, the following segments will by 2020 operate at LOS “F”: Etris Road to Crabapple Road; Houze Way to Crossville Road; and Crossville Road to Woodstock Street.

Hardscrabble Road

Hardscrabble Road is a two-lane minor arterial connecting Crossville Road (SR 92) and Crabapple Road. It connects with SR 92, which carries traffic from Cobb County eastbound, and it is used as a through-route (via Rucker Road) to Alpharetta and points east, including Gwinnett County.

Two of this minor arterial’s segments (i.e., between SR 92 and Etris Road) operate at a very poor LOS “F” in 2005, with V/C ratios of more than 1.30. These segments of Hardscrabble Road will operate at about the same LOS “F” in 2020 according to the model.

Hembree Road

Hembree Road is a significant east-west, two-lane minor arterial that connects Westside Parkway, Alpharetta Highway (SR 9) and Crabapple Road. As of 2005, only that portion between Upper Hembree Road and Houze Road (SR 140) operates at an unacceptable LOS “F” in 2005. However, by 2020, both this segment and the segment of Hembree Road between Wills Road and Alpharetta Highway (SR 9) will operate at LOS “F.”

Pine Grove Road/Magnolia Street

Pine Grove Road carries traffic to and from Cobb County in a route that generally parallels Marietta Highway (SR 120). It is classified as a two-lane minor arterial. West of Coleman Road, this route operates at an acceptable LOS "C" or "D." East of Coleman, it operates at LOS "F." By 2020, this same segment will operate at a V/C ratio of more than 1.5, making it one of the worst congested road segments in Roswell. The rest of this minor arterial is projected to operate at an acceptable LOS "D" in 2020. The transportation planners in 2000 modeled the effects of widening Pine Grove Road/Magnolia Street east of Mimosa Boulevard and found that the widening would improve LOS to "D" and "E" in 2020.

Azalea Drive

Azalea drive is a two-lane major collector that connects Willeo Road and SR 9 paralleling the Chattahoochee River. Along this route Roswell has installed a multi-use asphalt path. Azalea Drive operates at a LOS "C" in 2005 and is projected to operate at a "C" in 2020.

Grimes Bridge Road

Grimes Bridge Road is a two-lane major collector that connects Holcomb Bridge Road and Norcross Street/Warsaw Road and extends to the south through residential neighborhoods to Dogwood Road. All of this road operates at an acceptable LOS "C" in 2005. Transportation planners in 2000 modeled Grimes Bridge Road between Holcomb Bridge Road and Norcross Street/Warsaw Road and found that by 2020 this segment would operate at an acceptable LOS "C."

Nesbit Ferry Road

Nesbit Ferry Road is a mostly two-lane major collector that connects Holcomb Bridge Road (SR 140) with Old Alabama Road. Only the properties abutting the west side of Nesbit Ferry Road are within Roswell. Between Old Alabama Road and Scott Road in 2005, the portion of Nesbit Ferry Road within the City of Roswell operated at a LOS "F" and a V/C ratio of 1.49. This segment will degrade its level of service further by 2020 with a V/C ratio of 1.61. The remainder portions of Nesbit Ferry Road operate at an acceptable LOS "C" in 2005 but will increase to LOS "D," "E," and "F," by 2020.

Norcross Street/Warsaw Road

Norcross Street connects Canton Street, SR 9, and Grimes Bridge Road. Warsaw Road connects with Holcomb Bridge Road (SR 140), Old Roswell Road, and Mansell Road. Both are two-lane major collectors. Between Grimes Bridge Road and Holcomb Bridge Road in 2005, Warsaw Road operates at a LOS "E." By 2020 these major collectors will continue to operate at acceptable LOS according to model results.

Old Roswell Road

Old Roswell Road is a mostly two-lane major collector that connects Hembree Road to the north with Mansell Road and Holcomb Bridge Road (SR 140). All segments operate at an acceptable LOS in 2005, according to the 2000 model run. Transportation planners in 2000 modeled Old

Roswell Road as a four-lane facility from Holcomb Bridge Road to Warsaw Road and found that it would operate at a LOS "C" in 2020.

Riverside Road

Riverside Road connects Atlanta Street (SR 9) and Dogwood Road and crosses under Georgia 400 to connect with Old Alabama Road. It operates at acceptable LOS in 2005 and is projected to continue operating at acceptable LOS in 2020. Transportation planners modeled Riverside Road between Dogwood Road and Old Alabama Road as a four-lane facility and found it would operate at LOS "C" in 2020.

RECENT ESTIMATES OF ANNUAL AVERAGE DAILY TRAFFIC

Average daily traffic is usually obtained through machine counts. They may be street counts (total volume without regard to direction) or directional counts. Directional counts are used for capacity analyses, planning improvements, obtaining accumulations within a cord, etc. Counts are generally obtained through the use of mechanical traffic counters.

Count sites are located such that traffic is proceeding normally without significant lane changing or other maneuvers that might distort the count. The average daily traffic counts are used to measure the present demand for service on the streets and highways. These volumes are used to locate areas where new facilities or improvements to existing facilities are needed. The City is currently collecting updated counts; however, the Georgia Department of Transportation has more recent data for arterials from 2003 which are provided below.

The current (2005) transportation system levels of service (LOS) and system needs are based on existing design and operating capacities for the year 2005 as supplied in the 2020 Comprehensive Plan. The most recent traffic counts from Georgia DOT are for the annual average daily traffic in the year 2003 and are provided in Table 12.10. These data, when compared with the year 2005 model estimate, can help gauge the validity of the model and demonstrate how trends may have deviated from those predictions.

Table 12.10
2003 Annual Average Daily Traffic (AADT)
State Routes in Roswell

Route	Begin Intersection	End Intersection	2003 AADT
SR 9	Houze Road	Mansell Place	42,210
SR 9	Crossville Road	Commerce Parkway	44,270
SR 140	Alpharetta Highway	Market Place	55,190
SR 140	Old Alabama Rd	Nesbit Ferry Way	38,980
SR 400	Holcomb Bridge Road	NB Offramp To Mansell Road	162,600

Source: Georgia Department of Transportation

CONGESTION MANAGEMENT DATA

The Congestion Management System (CMS) is a systematic process used by the Atlanta Regional Commission for analyzing and managing congestion by providing information on system performance. This, in turn, provides the agency and government entities with

opportunities and strategies for alleviating congestion and maximizing the efficiency of the transportation system. In order to manage a transportation system, a CMS provides continual monitoring and evaluation of travel conditions in the region. The monitoring system relies on a variety of tools to evaluate itself, provides feedback regarding congestion hotspots, and suggests potential causes of the congestion. Based on the type, location, and cause of the congestion, a monitoring system can identify and evaluate alternative actions and ultimately assess and implement cost-effective, efficient, and effective transportation solutions.

According to the CMS, there are several facilities within Roswell that meet certain congestion thresholds. These underscore and substantiate the previous analysis of traffic conditions. See Table 12.11.

Table 12.11
Congested Roadways in the City of Roswell
As Defined in ARC's Congestion Management System

Congested Facility	From	To	Problems/Causes
Hardscrabble Rd.	Crabapple Rd.	Woodstock Rd.	Heavy Peak Volume
Holcomb Bridge Rd.	Gwinnett County line	Alpharetta St.	Heavy Peak Volume
Old Roswell Rd.	Holcomb Bridge Rd.	Mansell Rd.	Heavy Peak Volume
SR 140/Houze Rd.	Rucker Rd.	Mansell Rd.	Heavy Peak Volume
SR 400	I-285 North*	Forsyth County Line	Heavy Peak Volume
SR 9	Forsyth County Line**	Hembree Rd.	Heavy Peak Volume

Source: Atlanta Regional Commission.

* Chattahoochee River to Big Creek

** Hembree Road to Upper Hembree Road

SIGNALIZED INTERSECTIONS

A list of signalized intersections by road classification is provided in Table 12.12. As of November 1, 2004, the City of Roswell maintained 93 traffic signals. The Governor's Fast Forward Program includes traffic signal coordination on SR 9 and on Holcomb Bridge Road. These projects are currently under design and are scheduled to bid in June 2005. This will assist the City in reducing congestion in these corridors.

Table 12.12
Signalized Intersections by Type of Road
City of Roswell

North to South or East to West		North to South or East to West	
<u>State Route</u> Primary @ Secondary		<u>City</u> Primary @ Secondary	
1	Alpharetta Hwy.(SR9) @ Upper Hembree Rd	50	Azalea Dr. @ Atl. Rowing Club
2	Alpharetta Hwy.(SR9) @ Hembree Rd.	51	Canton St. @ Woodstock Rd.
3	Alpharetta Hwy.(SR9) @ Elkins Rd.- 2001'	52	Coleman Rd. @ Willeo Rd. - Aug 2003
4	Alpharetta Hwy.(SR9) @ Sun Valley Dr.	53	Crabapple Rd. @ Etris Rd.
5	Alpharetta Hwy.(SR9) @ Houze Way	54	Crabapple Rd. @ Hembree Rd.
6	Alpharetta Hwy.(SR9) @ Mansell Rd.	55	Crabapple Rd. @ Houze Way
7	Alpharetta Hwy.(SR9) @ Commerce Pkwy.	56	Dogwood Rd. @ Grimes Brgd. Rd.
8	Alparetta St. (SR9) @ Woodstock St.	57	Grimes Brgd. Rd. @ Vickery Ln.

9	Alpharetta St./Atlanta St.(SR9) @ Norcross St.	58	*Grimes Brgd. Rd. @ Shadowbrook
10	Atlanta St.(SR9) @ Magnolia St./Canton St.	59	Hardscrabble Rd. @ Etris Rd.
11	Atlanta St.(SR9) @ Oak St.	60	Hardscrabble Rd. @ King Rd.
12	Atlanta St.(SR9) @ Sloan St./Park Square	61	Haynes Brgd. Rd. @ Haynes Crossing
13	Atlanta St.(SR9) @ Marietta Hwy.(SR120)	62	Hembree Rd. @ Maxwell Rd.
14	Atlanta St.(SR9) @ Azalea Dr./Riverside Rd.	63	Hembree Rd. @ Wills Rd.
15	Houze Rd.(SR140) @ Arnold Mill/Crabapple Rd.	64	Hembree Rd. @ Elkins Rd.
16	Houze Rd.(SR140) @ Rucker Rd.	65	Hembree Rd. @ Upper Hembree Rd.
17	Houze Rd.(SR140) @ Hembree Rd.	66	Magnolia St. @ Mimosa Blvd.
18	Houze Rd.(SR140) @ Houze Way	67	Mansell Rd. @ Eagle Crest Village
19	Houze Rd.(SR140) @ Mansell Rd.	68	Mansell Rd. @ Mansell Village - 10-2003'
20	Holcomb Bridge Rd.(SR140) @ Alpharetta Hwy.(SR9)	69	Nesbit Ferry Rd. @ Scott Rd.
21	HBR (SR140) @ Grimes Bridge Rd./Old Roswell Rd.	70	Norcross St./Warsaw Rd. @ Grimes Brgd. Rd.
22	HBR (SR140) @ Warsaw Rd.	71	Norcross St. @ Forrest St./Frazier St.
23	HBR (SR140) @ Old HBR/Riverwood Village Apts.	72	Old Alabama Rd. @ Roxburgh Dr./Pine Bloom Dr.
24	HBR (SR140) @ Dogwood Rd.	73	Old Alabama Rd. @ Old Alabama Connector
25	HBR (SR140) @ Ga.400	74	Old Alabama Rd. @ Wooten Rd.
26	HBR (SR140) @ Market Blvd.	75	Old Alabama Rd. @ Rouse Lane
27	HBR (SR140) @ Old Alabama Rd.	76	Old Alabama Rd. @ Holcomb Woods Pkwy.
28	HBR (SR140) @ Fire Station 4	77	Old Alabama Rd. @ Market Blvd.
29	HBR (SR140) @ Holcomb Woods Pkwy.	78	Old Alabama Rd. @ Riverside Dr.
30	HBR (SR140) @ Martins Lndg. Dr./Terramont Dr.	79	Old Roswell Rd. @ Old Ellis Rd.
31	HBR (SR140) @ Calibre Creek Dr.	80	Old Roswell Rd. @ Warsaw Rd.
32	HBR (SR140) @ Eves Rd.	81	Old Roswell Rd. @ Commerce Pkwy.
33	HBR (SR140) @ Fouts Rd.	82	Pine Grove Rd. @ Hightower/Waterford Way
34	HBR (SR140) @ Steeple Chase Dr. W	83	Pine Grove Rd. @ Lake Charles Dr.
35	HBR (SR140) @ HBR Middle School (10-01')	84	Pine Grove Rd. @ Coleman Rd.
36	HBR (SR140) @ Steeple Chase Dr. E (10-01')	85	Riverside Rd. @ Dogwood Rd.
37	HBR (SR140) @ Nesbit Ferry Rd. (10-01')	86	Riverside Rd. @ Riviera Dr. (10-22-02)
38	HBR (SR140) @ Barnwell Rd. (10-01')	87	Scott Rd. @ Old Scott Rd.
39	Crossville Rd.(SR92) @ Mansell Rd.	88	Willeo Rd. @ Azalea Dr.
40	Crossville Rd.(SR92) @ Bent Grass Dr. - 2001'	89	Willeo Rd. @ Chattahoochee Nature Center
41	Crossville Rd.(SR92) @ Crabapple Rd.	90	Woodstock Rd. @ Jones Rd. - 7-2002'
42	Crossville Rd.(SR92) @ Roswell Crossing	91	Woodstock Rd. @ Roswell Area Park
43	Crossville Rd./Woodstock Rd(SR92) @ King Rd.	92	Woodstock Rd. @ Stone Bridge / Queen of Angels School
44	Woodstock Rd.(SR92) @ Westwind Blvd.		
45	Woodstock Rd.(SR92) @ Hardscrabble Rd.		
46	Woodstock Rd.(SR92) @ Mtn. Park / Bowen Rd.		
47	Woodstock Rd.(SR92) @ Steeple Run / Wildwood Springs Dr.		
48	Marietta Hwy (SR120) @ Coleman Rd.		
49	Marietta Hwy (SR120) @ Willeo Rd.		

Total of Stop and Go Traffic Signals
Currently Maintained by RDOT = 92

Source: Roswell Department of Transportation.

ACCIDENT DATA

The Office of Traffic Safety and Design at the Georgia Department of Transportation maintains accident frequency data. The goal of the State is to assist in the Statewide reporting of accurate crash reports and maintain a repository of timely and accurate data related to motor vehicle crashes, injuries, and fatalities. This information is vital to the planning and programmatic functioning of law enforcement agencies, government entities, including the Department of Transportation, highway safety advocates, and community coalitions. In October 2003, the Georgia Department of Motor Vehicle Safety completed reconstruction of the crash data records and released five years of injury and death data (1998-2002). Table 12.13 provides Fulton County information.

Table 12.13
Vehicle Injuries and Deaths, 1998-2002
Fulton County

	1998	1999	2000	2001	2002
Injuries	19,680	19,117	18,423	18,235	16,703
Deaths	135	114	131	116	121

Data Source: Georgia Department of Motor Vehicle Safety

Crash data for the City of Roswell was collected from January 2002 through December 2002 from the Georgia Department of Transportation. There were 2,860 accidents reported in the City during this period. Twenty percent occurred on state routes and the remainder occurred on local streets. The vast majority (88 percent) of these accidents occurred under normal driving conditions; 56 percent involved injuries, and less than 1 percent involved deaths. The City of Roswell data compare very favorably with those of Fulton County as a whole. Based on these data, no specific measures are warranted with regard to reducing accident frequency or potential.

BRIDGES

According to GDOT, the City of Roswell road network has 28 bridges (see Table 12.14). All bridges contain a sufficiency rating although this is not necessarily an indicator of structural condition. Typically taking into account many different factors concerning how suitable a structure is for replacement; items such as amount of traffic, roadway alignment, design capacity, and roadway width are included in this factor. When sufficiency rating falls below 50, GDOT usually recommends replacement. However, according to GDOT, the condition codes give a better indication of the actual condition of the bridge. This code is on a scale of 1 to 9, with 9 being new condition. A rating of 5 is fair and may require some maintenance; a rating of 4 or less definitely necessitates some type of repair.

Though it is in sound structural condition, there are safety issues on Foe Killer Creek (Upper Hembree Road) which is scheduled for repair in 2005 according to the recently adopted ARC Transportation Improvement Program. Grimes Bridge (Big Creek at Grimes Bridge Road) is being rebuilt pending GDOT approval of the concept plan. The bridge over Foe Killer Creek on Hembree Road is programmed for rehabilitation in fiscal year 2006.

Table 12.14
City of Roswell Bridge Inventory

Tributary or Facility	Facility	Location	Future ADT	Length (feet)	Width (feet)	No. of Lanes	Condition Rating of Deck	Condition Rating of Super- structure	Structural Evaluation
Chatta- hoochee River	US 19/ SR 400	1.8 Mi. E of Roswell	295,050 Year:2021	679	64	8	7	8	5
Big Creek	Holcomb Bridge Road	W of Ga. 400	109,350 Year:2021	232	40	6	7	8	7
Foe Killer Creek	Old Roswell Rd	2.7 Mi. S of Alpharetta	21,750 Year:2021	41	20.7	2	7	7	2
Hogwallers Creek	SR 9	S of SR 140	58,500 Year:2021	41	64	5	N	N	7
Hogwallers Creek	Norcross St.	E of SR 9	20,250 Year:2021	30	31	2	7	7	5
Chatta- hoochee River Trib.	Riverside Rd	4 Mi SE of Roswell	2,340 Year:2021	30	35.2	2	6	6	5
Big Creek	Riverside Rd	In South Roswell	16,050 Year:2021	160	24	2	7	7	2
Hogwallers Creek Trib	Crossville Rd	4.5 Mi W of Alpharetta	37,800 Year:2018	23	80	6	N	N	7
Hogwallers Creek	Crabapple Rd	In NW Roswell- Old SR140	19,200 Year:2021	23	33	2	N	N	7
Foe Killer Creek	Hembree Rd	2 Mi SW of Alpharetta	18,630 Year:2023	48	20.8	2	7	7	5
Chattahoo- chee River Trib.	Riverside Rd	3 Mi SE of Roswell	2,340 Year:2023	90	35	2	7	7	5
SR 400 (US 19)	Holcomb Bridge Road	8.1 Mi N of I-285	99,000 Year:2021	302	99.9	9	6	7	6
Willeo Creek	Pine Grove Rd	At W Roswell City limits	28,000 Year:2020	200	39.5	2	8	8	8
Foe Killer Creek	SR 9	N. of SR 140	63,600 Year:2021	50	66	5	N	N	7
Chatta- hoochee River	Roswell Rd	1.1 Mi S of SR 120	69,450 Year:2021	627	28	4	6	6	6
Willeo Creek	Jones Rd	At west Roswell City limit	2,340 Year:2021	90	21	2	7	7	5
Big Creek	Mansell Rd WBL	In South Alpharetta	68,700 Year:2021	340	30	2	8	8	7
Big Creek	US 19/ SR 400	9.1 Mi N of I-285	237,600 Year:2021	183	80	7	7	7	6
Hogwallers Creek	Alpine Dr	In Roswell City limits	2,340 Year:2021	25	38.5	2	N	N	7
Willeo Creek	Willeo Rd	.01 Mi N of Cobb Co. line	2,340 Year:2021	120	22.8	2	6	6	5
Chattahoo- chee Riv Trib	Azalea Dr	1.4 Mi E of Cobb Co. line	2,340 Year:2021	30	35	2	6	6	5
Hogwallers Creek	Oxbo Rd	E of SR 9	2,340 Year:2021	60	26	2	7	7	5
Big Creek	Old Holcomb Br Rd	N of SR 140	2,340 Year:2021	82	21.9	2	6	6	2
Hogwallers Creek	Charles Place	Midtown Roswell	2,340 Year:2021	90	22.8	2	7	7	5

Tributary or Facility	Facility	Location	Future ADT	Length (feet)	Width (feet)	No. of Lanes	Condition Rating of Deck	Condition Rating of Super-structure	Structural Evaluation
Big Creek	Grimes Bridge Rd	In South Roswell	2,340 Year:2021	150	22.8	2	6	6	4
Foe Killer Creek	Upper Hembree Creek	2 Mi SW of Alpharetta	2,340 Year:2022	60	20.9	2	7	7	3
Chattahoochee River Trib.	Marietta Highway	In SW Roswell	41,100 Year:2021	30	95.5	6	N	N	7

Source: Georgia Department of Transportation

Bridges will wear out just as buildings and streets do. Like pavement maintenance, bridge maintenance has been neglected in communities across the country. Bridges are complex structures that always require evaluation by a specialist. Bridge structural engineers can temporarily close any bridge if it poses a public safety hazard. Bridges are regulated by federal and state requirements and guidelines. Bridges are subject to fatigue brought on by constant loading, as well as other factors that will limit the life of the bridge. The American Association of State Highway and Transportation Officials recommends that bridges be inspected once every two years (Bailey et al. 1986). Due to expenses, bridge work on a public road is almost always funded mostly by federal and state resources, rather than local resources.

RESPONSE TO ROADWAY DEFICIENCIES

An assessment was conducted to determine whether existing facilities and current levels of service are adequate to meet the needs of Roswell. Growth trends and travel patterns and the compatibility between the Land Use and Transportation Elements were examined. As the Population, Housing, and Economic Development Elements of this Comprehensive Plan illustrate, Roswell has experienced rapid growth over the last 20 years. While the City is served by MARTA, travel by private automobile remains the primary mode of transportation in the City and county.

None of the road improvement projects scheduled by the state or region are expected to provide significant, additional capacity to the City's thoroughfare system. Currently, the City is studying the Holcomb Bridge Road corridor east of Georgia 400, which includes fast food restaurants, gas stations, convenience and banking outlets, and retail centers. In order to accomplish its goals and vision for the Holcomb Bridge Road corridor, the City is working on a plan that will discourage sprawl and encourage mixed-use redevelopment and the preservation of the community's heritage and environmental assets, chief among them being the Chattahoochee River. The plan will contain a complete conceptual master plan for sidewalks and multi-purpose trails that will help overcome the visual barrier created by the presence of GA 400.

PROPOSED IMPROVEMENTS

Short-term (2005-2010) transportation projects for which impact fee funds may be spent are shown in Chapter 14, Table 14.2, of this Comprehensive Plan. Other transportation projects are shown in Table 14.3 of the Comprehensive Plan.

In addition to those short-term projects, the Roswell Transportation Department has developed a list of mid-range (2010-2015) and long-range (2016-2025) transportation projects. These are

presented in Table 12.15. It is noted that cost estimates are not provided, because these projects have not been preliminarily designed, and because they are too far into the future to predict their costs.

Table 12.15
Potential Mid-Range to Long-Range Transportation Projects

Project	Description
Sidewalk Projects	
Chaffin Road from Hembree Road to SR 140	Sidewalk Project
Hardscrabble Road from King Road to Etris Road	Sidewalk Project
Hardscrabble Road from King Road to SR 92	Sidewalk Project
Hembree Road from SR 9 to SR 140	Sidewalk Project
Holcomb Bridge Road from Scott Road to GA 400	Sidewalk Project
Holcomb Bridge Road from Scott Road to Barnwell Road	Sidewalk Project
Mountain Park Road from Mountain Park Elementary School to SR 92	Sidewalk Project
Old Alabama Connector from Old Alabama Road to City Limit	Sidewalk Project
Pine Grove Road from Coleman Road to City Limit	Sidewalk Project
Riverside Road	Sidewalk Project
Gaps in Existing Sidewalk	Sidewalk Project
New Roadway Sections	
Commerce Parkway from Old Roswell Road to Holcomb Bridge Road	New Roadway Section
Mansell Extension from SR 92 to SR 9	New Roadway Section
Old Ellis from existing terminus to Sun Valley Drive	New Roadway Section
Warsaw Extension from existing terminal point to Sun Valley	New Roadway Section
Mansell Place from existing terminus to Old Ellis	New Roadway Section
Intersection Improvements	
Bowen Road at SR 92	Intersection Improvement
Crabapple Road at Rucker Road	Intersection Improvement
Crabapple Road at Hembree Road	Intersection Improvement
Grimes Bridge Road at Norcross Street / Warsaw Road	Intersection Improvement
Holcomb Bridge Road at GA 400	Intersection
Holcomb Bridge Road at Nesbit Ferry Road	Intersection
Houze Road at Hembree Road	Intersection Improvement
Houze Way at SR 9	Intersection Improvement
Norcross Street at Forrest Street / Frazier Street	Intersection Improvement
Pine Grove Road at Hightower Road / Waterford Way	Intersection Improvement
Pine Grove Road at North Coleman Road	Intersection Improvement
Pine Grove Road at Lake Charles Drive	Intersection Improvement
Warsaw Road at Old Roswell Road	Intersection Improvement
Woodstock Road at SR 92	Intersection Improvement
Reconstruction Projects	
Mansell Road	Reconstruct Roadway
SR 9 Reversible Lanes from SR 120 to Riverside Road	Reconstruct and Eliminate Reversible Lanes

Other Projects	
Centennial High School and East Roswell Park	Pedestrian Bridge
Fire Station # 7 and Garrard Landing	Traffic Signal
Traffic Signal Communications Network (Signal Fiber Cable-Citywide)	ATMS
Provide support for TMA-GA 400 to Alpharetta City Limits	Demand Management
Transit	
New MARTA Bus Route - E. Roswell to N. Springs Station	Transit Express Service
New MARTA Bus Route - W. Roswell to N. Springs Station	Transit Express Service

CONCLUSIONS ABOUT HIGHWAY AND ROAD NETWORK

The City of Roswell has clearly taken the position that it does not favor major road widenings in the City. Public opinion from the City's visioning meetings and its bicycle and pedestrian planning effort demonstrated that citizens want to connect origins and destinations with sidewalks and bikeways. Along with that trend is an increasing emphasis on the way that streets contribute to the sense of place in this community.

Streets, from this point of view, are social spaces that should provide a balance among multiple modes and needs including pedestrians, bicycles, mass transit, and the automobile. Streets are viewed less as thoroughfares and more as contributors to the vitality of the City as illustrated by the East Holcomb Bridge Road Study. In public visioning meetings, for example, it was stated that streets need to be safe places that have character. Citizens are clearly interested in streets that connect to neighborhoods, have wider sidewalks and contain street trees. Streets need to reflect the economic potential that redevelopment efforts can bring in conjunction with appropriate land-use intensities for each district in the City.

With fewer new arterial roadways being built, the need for effective systems management strategies is greater than ever before. Access management is particularly important. By managing roadway access, government agencies can increase public safety, extend the life of major roadways, reduce traffic congestion, support alternative transportation modes, and even improve the appearance and quality of the built environment. Without access management, the function and character of major roadway corridors can deteriorate rapidly. The following consequences can occur in situations where access is poorly managed and improvements are not made to the roadway system:

- an increase in vehicular crashes,
- more collisions involving pedestrians and cyclists,
- accelerated reduction in roadway efficiency,
- more traffic in residential areas due to overburdened arterials,
- homes and businesses adversely impacted by congestion,
- increased commute times, fuel consumption, and vehicular emissions, and
- degraded air quality.

PUBLIC TRANSPORTATION

To get a sense of the amount of travel that is currently made by auto in comparison with transit, a simple pie chart depicting the mode split is shown in Figure 12.1. Public transportation accounts for 1.4 percent of the daily trips. These trips are made by persons with an origin or destination inside the city itself. If the peak period portion of a given weekday was considered by itself, the percentage of transit trips would be significantly higher.

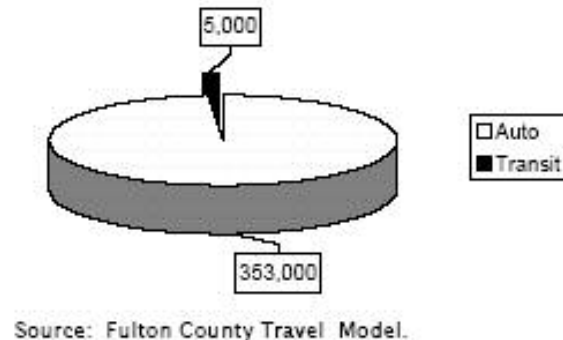


Figure 12.1
Year 2000 Auto-Transit Split

This indicates that home-based work trips are being made using transit. Data indicating the share of trips made by walking or bicycling for Roswell's working residents in 2000 was presented previously in Table 12.2.

According to the 2000 U.S. Census, only one percent of all Roswell workers age 16 and over use transit. This is compared with six percent region-wide. In examining the propensity of the residents of Roswell to use transit, one percent of owner-occupied and seven percent of renter-occupied housing do not have vehicles available. According to a recent (2002) ARC survey, 65 percent of all transit users do not have a vehicle available for use and nearly eighty percent (78%) of weekday MARTA bus users do not have a vehicle available. Since the majority of transit users can be considered transit-dependent because they did not have a vehicle available, this does not bode well for an increase in transit use in Roswell. Additionally, 66 percent of bus route users and 42 percent of rail users are low income (earning less than \$30,000 annually) according to this same survey. Median household income in Roswell is \$71,725, and only 15 percent of the population earns less than \$30,000. Again, it would appear that an increase in transit use for Roswell residents is unlikely.

DeKalb and Fulton counties are serviced by the largest transit system in Georgia — The Metropolitan Atlanta Rapid Transit Authority (MARTA). MARTA has been in operation since 1972. Ridership numbers vary between bus and rail. Annually, there are about 83.8 million boardings on scheduled bus routes in DeKalb and Fulton County, approximately 83.1 million boardings on scheduled trains, and about 173,000 paratransit boardings. MARTA has approximately 12,000 bus stops, 698 buses, 38 rail stations, 232 rapid rail vehicles, and 77 paratransit vehicles.

The City of Roswell has approximately 108 bus stops that serve four routes. The four routes are shown in Table 12.16 and illustrated on Map 12.5.

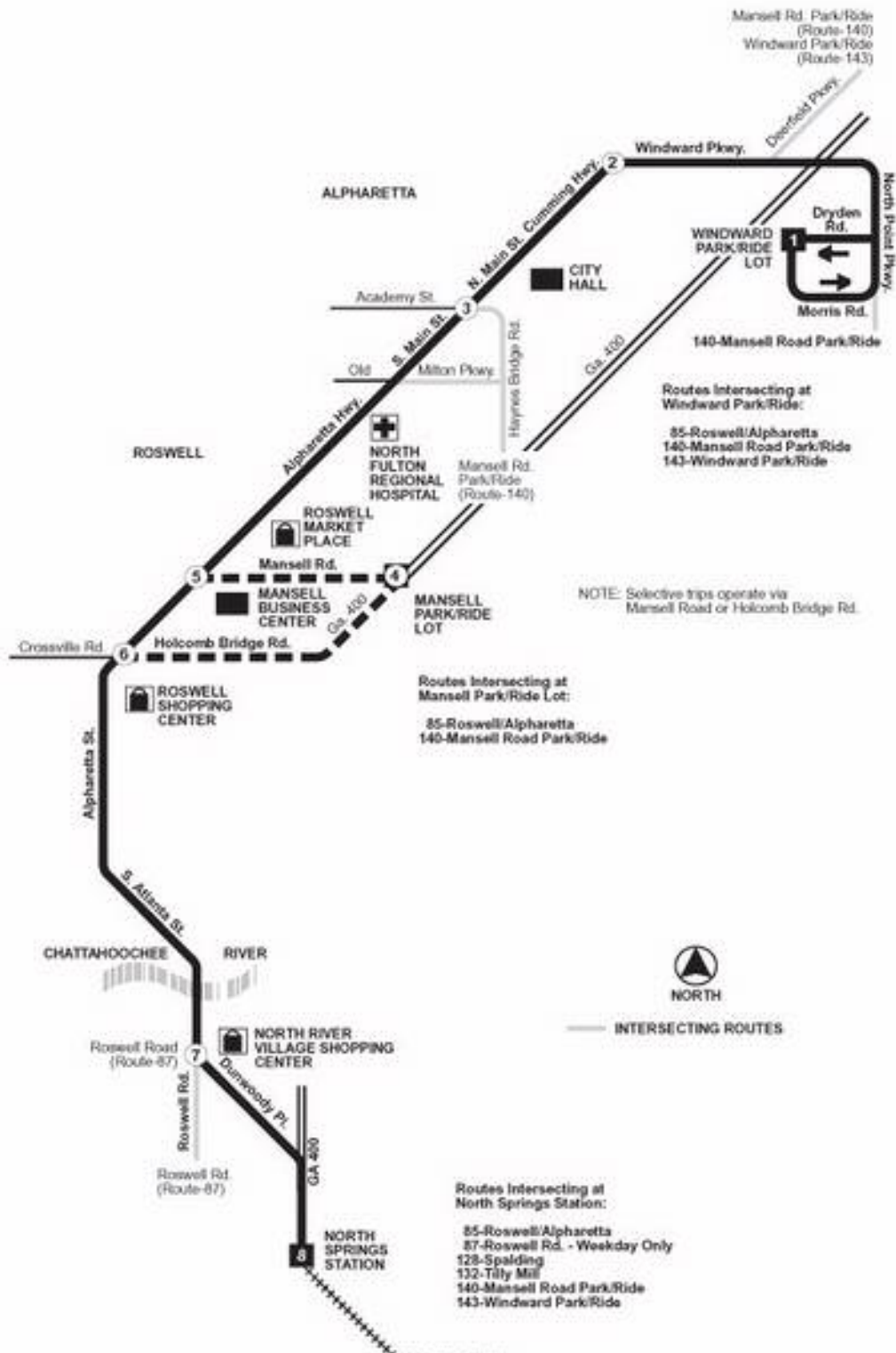
Table 12.16
MARTA Routes in Roswell, 2003

MARTA Route	Average Weekday Ridership, 2003	Headway (frequency of pick up at location)
# 85	1,902	15 minutes
# 87	2,500	20 minutes
# 140	386	15 minutes
# 143	474	25 minutes

Ridership levels declined by approximately 20 percent from 2002. Though some of the ridership decline can be attributed to job losses in the area, it is more likely a result of service modifications. For example, route 143 was an experimental “blue flyer” route in 2002, but it is now a more traditional route. In addition, the opening of the North Springs MARTA heavy rail station contributed to a change of route and frequency.

As is the case with many of MARTA's bus routes, these routes are long haul routes and serve many of the major employers in Alpharetta and the GA 400 corridor. According to the MARTA planning department, patrons on these routes arrive from the southern part of the metropolitan Atlanta region and work primarily in office environments. Many of these offices want additional service. However, due to the fact that MARTA service garages are far from Roswell which leads to a lot of “dead head” time, service modifications are difficult. In conjunction with MARTA's financial straits, this means that additional service may not occur. MARTA representatives have stated that service modifications may take place in 2005; this may lead to route modification, as opposed to a service increase.

All bus routes connect to the North Springs heavy rail station that serves downtown Atlanta, midtown Atlanta, Buckhead, Perimeter Center, and Hartsfield-Jackson International Airport. Three bus routes also stop by the Mansell Road Park-and-Ride lot and Windward Parkway Park-and-Ride lot in Alpharetta.

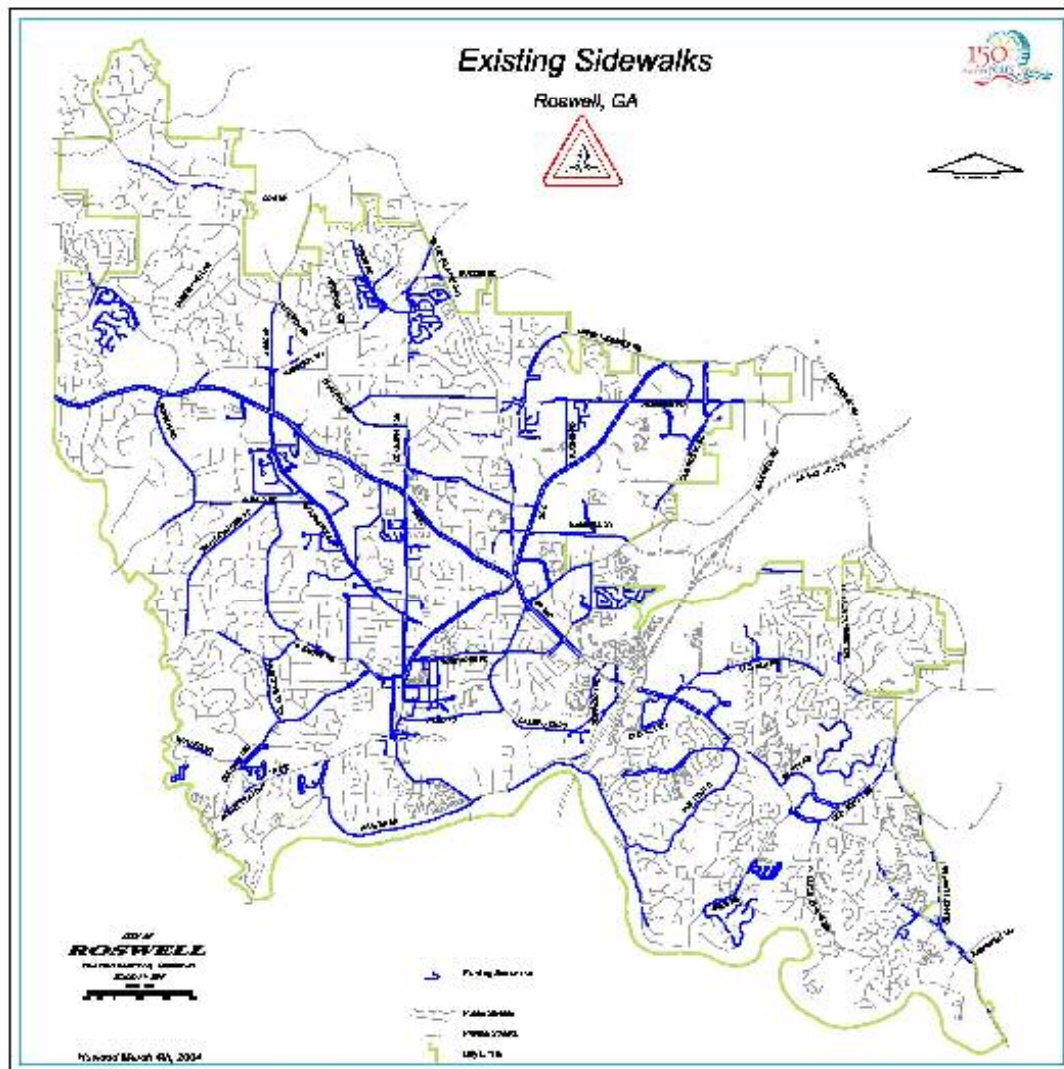


Map 12.4
MARTA Routes

BICYCLE AND PEDESTRIAN FACILITIES

Inventory

The 2020 Comprehensive Plan did not provide an extensive inventory of the sidewalk network. Roswell's Transportation Department has completed an inventory of existing sidewalks (in blue) which is shown on Map 12.5.



**Existing Sidewalks
Map 12.5**

Assessment

The bicycle and pedestrian facilities serve primarily recreational and leisure trip-making. An example is the multi-use trail along the Chattahoochee River. There is a constituency in the City that would like to see more bike lanes added to the City's major thoroughfares. These bike lanes would be placed on the road between the curb or shoulder and the outside travel lane used by vehicles. If positioned on the City's major collector and arterial street system, the bike lanes would provide the routing and connectivity that are needed for experienced bicyclists to travel places in a timely manner while eliminating sidewalk conflicts with pedestrians. It would also provide routing for longer distance recreational trips.

Efforts to expand bicycle and pedestrian facilities along the street system were made possible with City funding that was earmarked for transportation projects in the 1995 bond program. The City has also taken advantage of state and federal funding through the TEA-21 enhancement grant program administered by the Georgia Department of Transportation. Despite these efforts, a number of street sections in the thoroughfare network do not have sidewalks. Residents have shown earnest support for sidewalks along each main road in the City. Furthermore, a complete sidewalk system is a key element in establishing a multi-modal transportation system that supports public transportation and other travel demand management strategies. In recognition of these factors, completion of the sidewalk system must be a cornerstone of this plan.

Plans for Future Improvements

Roswell's bicycle facility planning is in a state of transition at this time, because the City will soon prepare a Transportation Master Plan. The City of Roswell developed a bicycle and pedestrian plan as a part of the Comprehensive Plan 2020. In developing the bicycle and pedestrian plan (adopted in the 2020 Comprehensive Plan), roads that were functionally classified as minor collectors and arterial streets were determined to be the most suitable for installation of sidewalks. While there are some collector streets that link to subdivisions, like Martin Road in Martins Landing, they are fewer in number. The 2020 Plan did not call for the provision of sidewalks on local streets inside subdivisions, because Roswell's subdivision and land development regulations require the installation of sidewalk at the time of subdivision development.

For purposes of the bicycle and pedestrian plan, this prior emphasis on the major and minor arterials of the City needs to be expanded in the future to include local roads that provide strategic linkages between subdivisions, access to commercial centers, and connections of subdivisions to public places (especially parks).

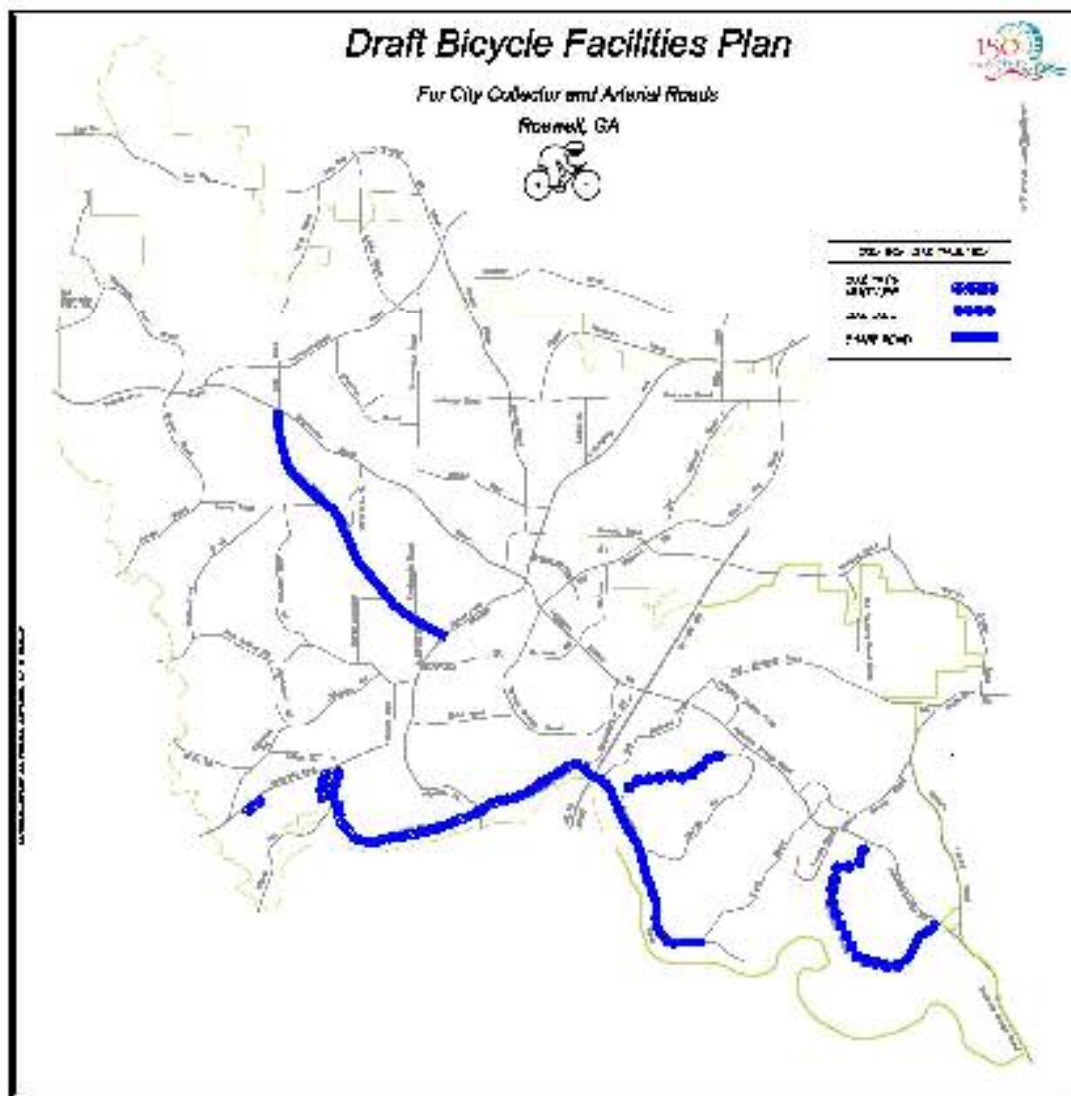
The adopted 2020 Comprehensive Plan called for too many projects for the City to fund. It was an ambitious plan whose implementation would have required extensive and continuous financial support from the public and almost constant attention and coordination within and among different departments in City government. The 2020 Comprehensive Plan called for nearly \$30 million of sidewalks and bicycle projects in the short-term work program (STWP). That amount increased to almost \$35 million during the mid-range work program (MRWP) and to \$36 million for the long-range work program (LRWP).

The four types of projects featured in the 2020 Plan were: (1) sidewalks; (2) on-road bike lanes; (3) multi-use paths alongside thoroughfares; and (4) multi-use paths in greenways. Spending during early years of the plan would go predominantly to sidewalk projects. In later years of the plan, multi-use paths in greenways would receive the highest share of funding.

The cross-sectional width of the paths that are called for in the 2020 Comprehensive Plan and this Transportation Element are twice that of a typical sidewalk (ten feet rather than minimum five feet in width). They are referred to as multi-use paths. They are designed to serve both bicyclists and pedestrians. Another type of path proposed in the 2020 Plan takes on the character of a trail. This type of path would consist of a natural, packed-earth surface to co-exist alongside a lake, stream or river with minimal intrusion.

This Transportation Element contains a set of policies or strategies linking the implementation of the projects to budgetary actions, urban design practices, land-use planning, zoning, road improvements, travel demand management, and subdivision ordinance requirements.

The Roswell Transportation Department has studied the network conditions and developed a more reasonable plan for improvements (See Map 12.6 for proposed bicycle system improvements).



Map 12.6
Draft Bicycle Facilities Plan

Sidewalks and bike projects should be prioritized into a more uniform set of projects as a part of the upcoming Transportation Master Planning process. A preliminary list drawn from the 2020 Comprehensive Plan is provided in Table 12.16, which is a starting point for considering mid-range to long-range improvement projects.

Table 12.16
Potential Mid-Range to Long-Range Sidewalks and Bike Paths

Rank ID (1)	Road Name	Area Description	Cross-Section	Facility Description (2)	Estimated Cost (\$1,000's) (3)
Sidewalks					
1	Holcomb Br. Rd. (SR140)	Connect Existing Sections	5 ft.	Sidewalk	\$2,950
2	Alpharetta St. (SR9)	Connect Existing Sections	5 ft.	Sidewalk	\$2,950
3	Marietta Hwy/Willeo Rd.	Azalea Dr. to Mimosa Blvd.	5 ft.	Sidewalk	\$620
5	Oakstone Drive	Lake Charles Rd. to Woodstock Rd.	5 ft.	Sidewalk	\$270
6	Eves Circle	Eves Rd. to Branch Valley Dr.	5 ft.	Sidewalk	\$700
9	Branch Valley Dr.	Martin Rd. to Eves Rd.	5 ft.	Sidewalk	\$330
10	Crabapple Rd.	Connect Existing Sections	5 ft.	Sidewalk	\$1,420
11	Nesbit Ferry Rd.	Old Alabama to Holcomb Bridge Rd.	5ft.	Sidewalk	\$2,570
12	Old Scott Rd.	Holcomb Bridge Rd. to Nesbit Ferry Rd.	5 ft.	Sidewalk	\$470
13	Old Alabama Rd.	Holcomb Bridge Rd. to Old Alabama Connector	5 ft.	Sidewalk	\$1,060
14	Grimes Bridge Rd.	Dogwood Rd. to Holcomb Bridge Rd.	5 ft.	Sidewalk	\$950
15	Old Roswell Rd.	Hembree Rd. to Holcomb Bridge Rd.	5 ft.	Sidewalk	\$1,23
Bike Lanes and Routes				Subtotal	\$16,350
4	Marietta Hwy/Willeo Rd.	Azalea Dr. to Mimosa Blvd.	4 ft.	Bike Lanes	\$300
16	Etris Rd./Crabapple Rd.	Cagle Rd. to Woodstock Rd.	4 ft.	Bike Lanes	\$2,100
17	Canton St./Mimosa Blvd.	Woodstock Rd. to Marietta Hwy. (SR 120)	NA	Signed (Only Bicycle Route	\$10
Multi-Use Paths				Subtotal	\$2,410
7	Eves Road	Riverside Rd. to Scott Rd.	8-10 ft.	Concrete multi-use(2)	\$950
8	Scott Road	Old Scott Rd. to Holcomb Br. Rd.	8-10 ft.	Concrete multi-use(2)	\$370
Greenway Paths				Subtotal	\$1,320
1	Willeo/Azalea/Riverside	Riverwalk (Cobb Co. Border to GA 400)	10-12 ft.	Off-road concrete path	\$2,210
2	Vickery Creek	Riverwalk to Alpharetta border	10-12 ft.	Off-road compacted aggregate path	\$3,800
3	Foe Killer Creek	Vickery Creek to Hembree Rd.	10-12 ft.	Off-road concrete path	\$3,550
				Subtotal	\$9,560
				TOTAL	\$29,630
(1) Relative implementation order based on project selection and priority criteria. (2) Pedestrian or sidewalk facilities on both sides of street. (3) Costs in FY 2000 dollars/costs do not include right-of-way or utility relocations/costs shown in thousands of dollars. Source: 2020 Comprehensive Plan.					

AIR TRANSPORTATION

The City does not have a general aviation airport within its jurisdiction, though Hartsfield-Jackson International Airport serves as a major connecting hub for numerous destinations around the world. Each year, an increasing number of air travelers start or finish their journeys in the Southeast region of the United States. The City of Atlanta and the airlines at Hartsfield-Jackson Airport have authorized the airport to spend an impressive \$5.4 billion towards a 10-year development program. The Hartsfield-Jackson Airport Development Program will modernize and expand the current airport facilities to accommodate its current and future traffic demands. This program will assure that Hartsfield-Jackson maintains its global leadership role. The airport is approximately 31 miles from the city limits.

The DeKalb-Peachtree Airport (PDK), located approximately 14 miles from the City, sits on part of the old Camp Gordon, a World War I Army training base. The airport is classified as a general aviation reliever airport for the Atlanta metropolitan area. A reliever airport is a general aviation airport which reduces air carrier airport congestion by providing service for the smaller general aviation aircraft. The term "general aviation" encompasses the entire spectrum of aircraft and aircraft related businesses and services including the most sophisticated corporate and business jets, aircraft charters, training aircraft, helicopters, aircraft maintenance and refurbishment, and personal aircraft used for business and recreational purposes.

The airport has averaged about 230,000 operations (take-offs and landings) per year over the past 30 years. The DeKalb-Peachtree Airport is the second busiest airport in the State of Georgia in its number of operations, behind only Hartsfield-Jackson Atlanta International Airport. PDK's location only 8 miles from the heart of downtown Atlanta makes it the airport of choice for those operators of corporate, business, and general aviation aircraft visiting the Atlanta area.

Gwinnett County Airport is located slightly more than 34 miles from the City on approximately 500 acres just one mile northeast of the city of Lawrenceville. The airport consists of a single 6,021-foot-long by 100-foot-wide runway capable of handling all light general aviation and most corporate jet aircraft in operation today. In 1991, Gwinnett County Airport completed a \$25 million series of improvements which included the expansion of airport property to the current 500 acres and the construction of the current runway and parallel taxiway.

ON-STREET VEHICLE PARKING

Parking is a part of the transportation system. The City does not have a parking authority. There are some on-street parking spaces near the intersection of SR 9 and SR 120 in the heart of the downtown. There is limited surface parking within a four block radius of this intersection, serving the predominantly retail uses along SR 9. Most of the retail establishments along the City's major corridors have surface parking facilities serving their patrons.

However, the City's role in providing off-street parking may change in the near future. For instance, the Economic Development and Redevelopment Elements of this plan provide support for the eventual establishment of parking decks or municipal surface lots to help encourage redevelopment in the Midtown corridor.

VISION AND FRAMEWORK FOR FUTURE PLANNING

As noted in Chapter 19 of the 2020 Comprehensive Plan, the City has an extensive park system, family-oriented neighborhoods, a prized historic district, shopping and entertainment centers, and many public places. Accessibility and connectivity to and between these places by non-motorized modes of transportation is an integral strategy of the transportation plan.

As the City matures and the amount of automobile traffic grows, road capacity and additional parking are increasingly more difficult and costly to provide. There are options to the automobile that are simply not available in Roswell at this time. This Transportation Element and future Transportation Master Plan must give the City a boost toward making options for travel by other modes besides the automobile available.

That statement is confirmed by input obtained from two visioning forums held in 2004 as a part of the update of the Comprehensive Plan. Members of the community who participated expressed some frustration with the congestion on the City's street system as well as the lack of connectivity. Most attendees recognized that the supply of roadway capacity has simply not kept pace with the rate at which residential and commercial growth has occurred in the City and around its boundaries. However, those concerns raised during the visioning forums do not necessarily translate into wholesale support of road widening projects. The community visioning forums revealed that the public would like to have sidewalks, more facilities available for bicycling, and landscaping along roadways. They also want better connections to public transportation and additional transportation services that create more trip making options. The visioning process also noted the need to use more efficiently the school bus fleet.

It would be misleading to suggest that the bike and pedestrian plan, by itself, will have a measurable effect on reducing congestion on Roswell's street and highway system during daily peak periods. It is reasonable, however, to expect that a measurable reduction in peak period automobile traffic and parking space demand would occur if:

- Bicycle and sidewalk facilities are constructed;
- Travel demand management (TDM) programs are implemented;
- Public transportation is maintained at reasonable levels of service and appropriate connections to land uses are provided; and
- Land-use plan policies and possible reductions in minimum parking space requirements are implemented in the Zoning Ordinance.

A number of priorities were established in the 2020 Comprehensive Plan as listed below. These priorities should be consulted in terms of prioritizing projects, unless the upcoming Transportation Master Plan provides different criteria:

- Improve safety at places with high incidence of accidents,
- Fill gaps in existing sidewalks,
- Connect schools to nearby residential areas,
- Link to public transportation,
- Coincide with high-priority road improvement projects,
- Connect residential areas to commercial centers,

- Connect residential areas to parks,
- Connect residential areas to town centers,
- Provide bicycle facilities to link the north and south,
- Provide bicycle facilities to link the west and east,
- Connect parks to each other,
- Tie into existing and proposed projects from neighboring communities, and
- Link facilities within the City to proposed and existing regional and statewide systems.

TRANSPORTATION OBJECTIVES

The following objectives are provided to guide future transportation planning efforts (for additional policies, see “Roads and Bridges” in Chapter 10 of this Comprehensive Plan):

1. Enlist the citizens of Roswell as partners in the development and implementation of the plan.
2. Encourage the use of public transportation, including unused bus vehicles, and bicycle and pedestrian facilities to the fullest extent possible by providing better connectivity among these modes.
3. Manage access by ensuring convenient interparcel connections between businesses and land uses, where compatible.
4. Employ travel demand management strategies to reduce peak period congestion, such as: parking management, car/van pooling, transit incentives, park-and-ride lots, staggered work hours, transportation management associations, and other techniques as appropriate.
5. Provide connectivity to neighborhoods through the provision of sidewalks, bike lanes (alongside roads) and multi-use paths (greenways).
6. Develop a streetscape plan on a pedestrian scale.
7. Provide operational improvements like signal synchronization, acceleration and deceleration lanes, turn lanes at intersections and access management strategies to improve the operation of congested intersections.
8. Provide parking on the square.
9. Pursue funding sources that will increase the amount of resources available to the City to provide better sidewalks and bikeways.
10. Look for opportunities to provide better local connectivity by linking subdivisions to commercial nodes or subdivisions to schools and parks by means of sidewalks, bike trails, and short sections of new road.
11. Focus road funds on intersection improvements.

12. Seek a steady source of funding within the City that would be available for preliminary design work and plan modifications in accordance with opportunities and obstacles that present themselves as the City grows.
13. Indicate to City departments and members of the community who will be responsible for ongoing repair and maintenance of the bike and sidewalk system.
14. Provide adequate funding for repairs and maintenance on that portion of the bicycle and sidewalk network that is the City's responsibility.
15. Review codes for certain zoning categories or in certain districts to require developers to provide sidewalk and, possibly, bike facilities.
16. Modify codes for certain zoning categories to include provisions for easy access by pedestrians or bicyclists and to include facilities for storing bicycles.
17. Provide incentives to subdivisions, landowners, businesses and developers who provide land or easements for sections of the proposed bicycle and pedestrian facilities.
18. Provide bicycle storage facilities and include site plans that are pedestrian and bicycle friendly (e.g. park and ride lots, rail stations or bus route junctions) in future transit stations or shelter areas.
19. Be flexible in implementing and updating the plan to take maximum advantage of future road improvements, streetscape projects, and significant new developments/re-developments.
20. Coordinate strategies with the Fulton County School Board and private schools to make properties bike and pedestrian friendly.
21. Identify key parcels of land that may be used for strategic pedestrian linkages between subdivisions.
22. Consider treatments that will enhance the City's bike and pedestrian facilities. Preliminary designs for transportation improvement projects. This is especially important for bridge rehabilitation and intersection improvement projects.